

Vysoká škola ekonomická v Praze

## **Disertační práce**

Vysoká škola ekonomická v Praze  
Fakulta podnikohospodářská  
Studijní obor: Podniková ekonomika a management



Doktorská disertační práce  
**Typologie spotřebitelů na českém trhu potravin  
označených značkami kvality**

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### **Prohlášení**

Prohlašuji, že disertační práci na téma „Typologie spotřebitelů na českém trhu potravin označených značkami kvality“ jsem vypracoval samostatně. Použitou literaturu a podkladové materiály uvádím v přiloženém seznamu literatury. Toto prohlášení se netýká obsahu příloh práce, které jsou spoluautorským dílem.

V Praze dne 24. února 2019

Ing. Mgr. Tomáš Sadílek

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### **Poděkování**

Rád bych touto cestou vyjádřil poděkování svému školiteli, doc. Ing. Janu Koudelkovi, CSc., za veškerou podporu, rady a inspirativní diskuze, kterých se mi od něj dostalo. Dále bych chtěl poděkovat prof. Ing. Daně Zadražilové, CSc., vedoucí Katedry obchodního podnikání a komerčních komunikací za podporu během studia. Děkuji také doc. Ing. et Ing. Ondřeji Machkovi, Ph.D., MBA, za cenné připomínky během malé obhajoby.

## **Název disertační práce**

Typologie spotřebitelů na českém trhu potravin označených značkami kvality

### **Abstrakt**

Disertační práce se skládá z šesti recenzovaných článků o jednotlivých aspektech značek kvality potravin z pohledu vnímání kvality, zákazníků a producentů (Perception of Food Quality by Consumers – Literature Review, Importance of Food Quality Labels Included in the European Union Quality Schemes, Benefits of Regional Food Quality Labels for Czech Producers, Attitudes of Czech Consumers towards Food Quality Labels, Consumer Preferences regarding Food Quality Labels: The Case of Czechia, Certification of cheeses and cheese products origin by EU countries). Práce obsahuje úvodní sjednocující komentář a metodickou část, kde je blíže popsána metodika výzkumu a analýzy dat pro tvorbu typologie zákazníků na trhu potravin označených značkami kvality.

**Klíčová slova:** značky kvality potravin, postoje spotřebitelů, chování spotřebitele, typologie, Česká republika

**JEL Classification:** M31, Q18, P36

## **Title of the Dissertation Thesis**

Consumers' Typology on the Czech Market of Food Products Assigned by Quality Labels

### **Abstract**

The thesis consists of a six peer-reviewed journal articles about particular aspect of food quality labels from quality perception, customers' and producers' perspective (Perception of Food Quality by Consumers – Literature Review, Importance of Food Quality Labels Included in the European Union Quality Schemes, Benefits of Regional Food Quality Labels for Czech Producers, Attitudes of Czech Consumers towards Food Quality Labels, Consumer Preferences regarding Food Quality Labels: The Case of Czechia, Certification of cheeses and cheese products origin by EU countries). The thesis contains introductory unifying commentary and methodology part including description of collecting data and data analysis for building a consumer's typology for food products assigned by quality labels.

**Keywords:** Food Quality Labels, Consumers' Attitudes, Consumer Behaviour, Typology, Czech Republic

**JEL Classification:** M31, Q18, P36

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# 1. Struktura práce

Disertační práce se zabývá analýzou spotřebního chování na trhu potravin označených značkami kvality a vytvořením typologie spotřebitelů vůči vybraným značkám kvality potravin v České republice.

Problematika značek kvality spadá do oblasti řízení značky (brand managementu) a při využití srovnávacího přístupu napříč státy rovněž do oblasti mezinárodního marketingu a mezinárodního spotřebního chování a při odvětvovém zaměření také do oblasti marketingu potravinářství.

Struktura práce je tvořena šesti příspěvky, které jsou v době odevzdání práce v recenzním řízení, resp. v tisku ve vybraných časopisech s IF nebo evidovaných v databázi Scopus. Prvních pět příspěvků vzniklo v průběhu doktorského studia autora práce a šestý příspěvek vznikl ve spolupráci s Ing. Šárkou Velčovskou, Ph.D. z Ekonomické fakulty Vysoké školy báňské – Technické Univerzity Ostrava. Jde o článek Certification of cheeses and cheese products origin by EU countries (British Food Journal, 2015).

Práce obsahuje úvodní sjednocující komentář, jenž zahrnuje shrnutí hlavních myšlenek uvedených článků a doplňkových empirických studií uvedených v příloze práce. Uvedené články mají následující pořadí, které postupuje od problematiky vnímání kvality, přes chování spotřebitele, analýzu postojů, segmentaci, tvorbu typologie a modelu nákupního chování. V posledních dvou příspěvcích jsou doplněna zjištění o státní podpoře značek kvality potravin a o využívání značek kvality producenty sýrů v Evropské unii.

- 1) Perception of Food Quality by Consumers – Literature Review (European Research Studies Journal) – článek představuje úvod do problematiky vnímání kvality potravin spotřebiteli ve světové a české literatuře.
- 2) Importance of Food Quality Labels Included in the European Union Quality Schemes (EuroMed Journal of Business) – článek představuje systém značek kvality potravin s důrazem na Evropský systém značení původu potravin.
- 3) Benefits of Regional Food Quality Labels for Czech Producers (International Journal on Food System Dynamics) – článek představuje kvalitativní výzkum zaměřený na vnímání státní podpory značek kvality českými výrobci potravin.
- 4) Attitudes of Czech Consumers towards Food Quality Labels (International Journal of Consumer Studies) – článek je založen na výzkumu postojů českých respondentů ke

značkám kvality potravin a obsahuje vytvoření segmentace a typologie českých spotřebitelů.

- 5) Consumer Preferences regarding Food Quality Labels: The Case of Czechia (British Food Journal) – článek zahrnuje hlavní zjištění z kvantitativního výzkumu provedeného autorem a prezentuje vytvořený model chování spotřebitele.
- 6) Certification of cheeses and cheese products origin by EU countries (British Food Journal, 2015) – článek napsaný ve spolupráci s Ing. Šárkou Velčovskou, Ph.D. z Ekonomické fakulty VŠB – Technické univerzity v Ostravě ukazuje využití Evropského systému značek kvality výrobcí sýrů.

## 2. Úvod

Po zrušení potravinářských jakostních norem v roce 1993 se kvalita mnoha výrobků změnila, aniž by na to byl spotřebitel jakkoli upozorněn. Postupně se začaly objevovat informace, že je třeba sledovat složení výrobků, protože neobsahují to, co by ve skutečnosti obsahovat měly. Na druhou stranu toto nelze vždy výrobci potravin určit, leda by hrozilo porušení zdravotní nezávadnosti. Problémem však bylo a zůstává, že člověk nechodí nakupovat proto, aby v obchodech strávil svůj čas čtením mnohdy nepřehledně a nečitelně psaného složení, které u pultových prodejců často nebývá k dispozici vůbec. Proto se bohužel stává, že spotřebitel kupuje falšované výrobky, u nichž největší roli hraje název na obale, ne skutečné složení či výživová hodnota.

Časem se vodítkem kvality nebo případné nekvality potravinářských výrobků stala cena. Však ani ta dnes není zárukou obsahu kvalitních či spotřebitelem očekávaných surovin. Na jedné straně se dnes určité ukazatele kvality výrobků zlepšují, na straně druhé dochází ke stále častějšímu využívání náhražek v potravinách.

Otázkou je, co si vlastně spotřebitelé pod pojmem kvalitní potravina představují, jaké kladou nároky a kritéria na kvalitní potraviny a podle čeho kvalitní potraviny rozeznávají přímo při nákupu. Vnímání kvality potravin je totiž subjektivní záležitostí a každý spotřebitel má jiné požadavky na to, co za kvalitní potravinu pokládá. Podle Státní zemědělské a potravinářské inspekce tvoří celkovou kvalitu potravin především následující znaky: bezpečnost, chemické složení, fyzikální vlastnosti, senzorické vlastnosti, nutriční hodnota, původ potravin, doba trvanlivosti, balení a značení (Bendlová, 2014; Kopřiva, 2016). Protože není možné všechny znaky kvality potravin před jejich nákupem ověřit, hledá spotřebitel určité zdroje informací, které mu s výběrem kvalitní potraviny mohou pomoci. Jedním z takových zdrojů jsou právě značky kvality potravin. Tyto značky by měly být garancí kvality daného výrobku z hlediska složení, místa, způsobu výroby a měly by spotřebiteli pomoci s výběrem kvalitních a nefalšovaných potravinářských výrobků. Primárně jsou značky kvality určeny k tomu, aby pomohly spotřebiteli orientovat se v nabídce na trhu a ve výběru kvalitních potravin, aby usnadnily jeho rozhodování a redukovaly jeho nejistotu při nákupu, která souvisí s očekávanými charakteristikami potravin, ať už jde o jejich složení, původ, způsob výroby apod. Výrobci pak značky kvality mohou přinést konkurenční výhodu a vyšší šance v uplatnění na domácích i mezinárodních trzích. Nicméně tyto funkce plní značky kvality pouze

v omezené míře. Problém spočívá v jejich expanzi, ke které došlo během několika posledních let (Velčovská, 2018).

Vzhledem k tomu, že se na kvalitu jako na faktor při výběru potravin dívá stále více spotřebitelů, i značky kvality tímto nabývají na významu (Velčovská, 2018). Jsou významné nejen pro spotřebitele, ale také pro výrobce, který tímto způsobem může na svůj výrobek, jež splňuje dané parametry k získání takové značky, spotřebitele upozornit nebo se odlišit od konkurence a tím získat určitou konkurenční výhodu.

Značky kvality neboli tzv. účelové značky jsou grafické symboly, které se vyskytují na obalu produktu nebo na produktu samotném, případně v doprovodných informačních materiálech. Informují o vybraných parametrech produktu (obalu) či jeho užití (Velčovská, 2005).

Značky kvality jsou nástrojem, jak ubezpečit spotřebitele o kvalitě prostřednictvím certifikace. Konkrétní značky pokrývají jen určitý aspekt kvality, to znamená, že se na trhu lze setkat se značkami kvality výrobků nebo značkami kvality služeb.

Dle Tuldera (2006) existuje mezi značkami kvality velká rozmanitost. Značky je možné dělit dle několika kritérií (Velčovská, 2018): (1) závaznost a tržní výhoda, (2) kvalita a obsah, (3) rozsah, (4) geografické hledisko a (5) náklady na certifikaci.

V disertační práci a jednotlivých příspěvcích se dále pracuje s rozdělením značek dle obsahu na značky garantující:

- kvalitu nebo vybrané charakteristiky kvality (Klasa, Víť, co jím)
- bezpečnost (Bezpečná hračka, Zdravotně nezávadná obuv)
- původ výrobku (Český výrobek, Regionální potravina, Chráněné označení původu)
- ekologičnost (Bio – produkt ekologického zemědělství, Ekologicky šetrný výrobek)
- typ obalu (Zelený bod)
- a ostatní značky (Životnost plus).

Značky kvality mají nepopíratelný význam jak pro výrobce, tak pro spotřebitele. Spotřebitelům tyto značky poskytují určitou jistotu, jelikož výrobek nesoucí danou značku musí plnit stanovené normy či požadavky. Značky kvality dále přispívají k snadnější orientaci na trhu – „jak si vybrat s minimálním rizikem kvalitní výrobek či službu“. Jedním z předpokladů současného chování spotřebitelů je fakt, že lidé stále častěji kupují produkty ne proto, co dělají, ale proto, co pro ně znamenají. Mnohdy není produkt hodnocen podle svých konkrétních kvalit (ne jádra, tedy hlavního užítka, který má poskytovat), ale dle tzv. rozšířeného produktu

(souboru nehmateľných prvků, které přinášejí spotřebiteli vnímanou výhodu, např. image, servis, poradenství apod.). Součástí rozšířeného produktu jsou i značky kvality, které tímto způsobem ovlivňují chování spotřebitele (Turčínková, 2007; Klánová, 2013).

Přínos značek pro výrobce je mnohdy daleko vyšší než přínos značek pro spotřebitele. Značka kvality může fungovat jako efektivní marketingový nástroj, který vede ke zvýšení odbytu (po získání loga některé ze značek) či ke zvýšení povědomí mezi spotřebiteli, značky jsou tedy výrobci vnímány jako důležitý nástroj podpory prodeje. Z průzkumu realizovaného agenturou Focus Agency pro odborné periodikum Marketing Journal vyplývá, že 81 % společností vidí hlavní přínos používání značek kvality v očekávaném navýšení důvěry spotřebitelů. Dalším přínosem je již zmíněné navýšení tržeb a způsob, jak se odlišit od konkurence. A 39 % společností pak vnímá značku kvality jako garanci stálosti výroby a vysoké kvality svých produktů (Focus Agency, 2013; Horáček, 2014).

Na českém trhu s potravinami se nachází velké množství značek kvality, které by měly být vodítkem pro spotřebitele a zároveň zárukou kvality a původu výrobku. Spotřebitel se může setkat se značkami používanými pouze pro výrobky potravinářské (např. značka Klasa či Regionální potravina) nebo se značkami, které se udělují i v jiných výrobních kategoriích (např. CZECH MADE nebo Český výrobek).

Podle výsledků studie TNS Opinion & Social Network (European Commission, 2012), jež byla provedena v rámci výzkumu Special Eurobarometer Survey ve všech členských státech Evropské unie na reprezentativním výběrovém souboru 26 593 respondentů, bylo zjištěno, že pouze 22 % respondentů při nákupu potravin pravidelně kontroluje, zda má produkt nějakou značku kvality a v České republice toto provádí jen 15 % respondentů. To potvrzuje i výzkum marketingové agentury STEM/MARK (Potravinářská komora ČR, 2015) provedený na výběrovém souboru českých respondentů. Ten potvrdil nízkou znalost značek kvality potravin mezi českými spotřebiteli a respondenti rovněž deklarovali nedostatek informací o značkách kvality (Potravinářská komora ČR, 2015). Pouze 9 % Čechů při nákupu potravin upřednostní produkt certifikovaný značkou kvality před produktem bez takové značky. Čeští spotřebitelé mají tendenci preferovat spíše regionální a národní produkty před zahraničními, protože jejich motivem je také podpořit české výrobce oproti zahraničním. S tím koresponduje i zjištění, že národní značky kvality jsou známější než značky evropské a globální. Nejznámější značkou kvality v České republice je značka Klasa, která dosahuje podpořené znalosti skoro 90 %. Bohužel znalost ostatních značek kvality je podstatně nižší a pohybuje se od 0 % do 25 %. Pozitivním faktem je, že čeští spotřebitelé vnímají značky kvality potravin jako užitečné a mají

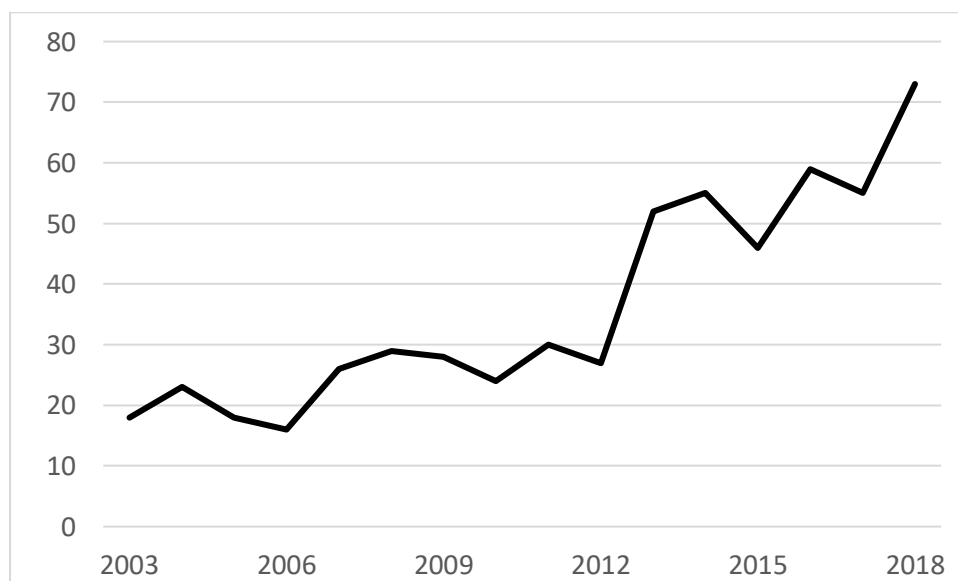
zájem o informace týkající se této problematiky. Hlavní bariérou nákupu certifikovaných výrobků je pak informační deficit (Potravinářská komora ČR, 2015).

### 3. Značky kvality potravin ve vědecké literatuře

Kapitola 3. Značky kvality potravin ve vědecké literatuře popisuje vývoj zkoumání značek kvality potravin v české a světové vědecké literatuře. Prezentované výstupy pocházejí z rešerše provedené v databázi Scopus s využitím metodiky dle Machka (2017).

Nejprve byl v databázi Scopus proveden dotaz na výběr příspěvků z oblasti značek kvality potravin. V prvním kroku byla pro vyhledávání využita následující klíčová slova: *food quality labels, quality labels, food labels a quality schemes* v možnosti *název článku, abstrakt a klíčová slova*. Druhým krokem bylo omezení výsledků vyhledávání na obory *ekonomika, management a účetnictví, ekonomie, ekonometrie, finance a sociální vědy a zemědělské a biologické vědy*. Dále byly analyzovány výsledky za posledních 15 let, tj. články z let 2003–2018. Výsledkem vyhledávání je 579 článků.

**Obrázek 1** Vývoj počtu článků zaměřených na značky kvality potravin v databázi Scopus (2003–2018)



Zdroj: vlastní zpracování

Nárůst počtu vědeckých publikací je možné, ve shodě s Machkem (2017), vysvětlit dvěma hlavními příčinami. Jednak celosvětovým tlakem na nárůst kvalitní publikační činnosti, což



znamená také příspěvky v časopisech evidovaných v databázi Scopus a druhým důvodem je nárůst počtu časopisů v těchto databázích evidovaných.

Z výše uvedeného počtu publikovaných článků však dosud nebyl publikován žádný, který by byl kompletní literární rešerší. Byly však publikovány literární rešerše studií zaměřených např. na vnímání výživových informací na značkách kvality spotřebiteli (Grunert, 2007).

Největší počet příspěvků byl publikován v časopisech *British Food Journal* (23), *Food Policy* (22), *Food Quality and Preference* (19) a *Nutrients* (18). Jde o časopisy primárně zaměřené na oblast zemědělských a biologických věd (potravinářství).

Druhou skupinou jsou časopisy zaměřené do oblasti ekonomiky a managementu, které rovněž publikují články o značkách kvality potravin. Jde např. o *International Journal of Consumer Studies* (17), *Journal of Food Products Marketing* (16), *American Journal of Agricultural Economics* (6) či *Quality – Access to Success* (4). Ostatní časopisy publikovaly méně než čtyři příspěvky, a proto nelze zdůraznit jejich zaměření na tematiku značek kvality potravin. Na rozdíl od jiných vědeckých oblastí neexistuje žádný časopis evidovaný v databázi Scopus zaměřený na značky kvality potravin. Podle názoru autora disertační práce není takový časopis vůbec vydáván a z toho důvodu autoři píšící o značkách kvality potravin publikují nejčastěji v časopisech zaměřených právě na oblast zemědělských věd, resp. potravinářství a ekonomiky a managementu.

V časopisech vydávaných v České republice jsou články o značkách kvality potravin pouze ve dvou periodikách *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis* (3) a *Czech Journal of Food Sciences* (1). Čeští autoři proto musí využívat zahraničních časopisů.

Pořadí zemí podle původu autorů příspěvků o značkách kvality potravin je následující: USA (149), Itálie (59), Francie (44), Španělsko (36), Spojené království (36). Čeští akademici dosud publikovali 11 příspěvků, a to řadí Českou republiku na 14. místo.

Tak jako je patrná koncentrace publikovaných článků o značkách kvality potravin v určitých zemích, je možné vyhledat i pracoviště, která se na výzkum značek kvality zaměřují. Jde zejména o Iowa State University a tým W. E. Huffmana, Ghent University a W. Verbekeho, Aarhus University a tým K. G. Grunerta a dále Universidad de la Republica v Montevideu (G. Ares a R. M. Nayga).

Hlavní témata výzkumu v oblasti značek kvality potravin jsou zaměřena na vnímání značek kvality (nebo vybrané značky) spotřebiteli a analýze postojů spotřebitelů vůči značce. Druhou

skupinou jsou práce zaměřené na porovnání systému značení potravin v rámci vybraných regionů či států – tyto práce mají jak deskriptivní, tak empirický charakter.

Dále je možné tvrdit, že zcela převažují práce s kvantitativním výzkumným designem (nejčastěji dotazování) a méně než 5 % jsou zastoupeny práce s kvalitativním výzkumným designem. Ty nejčastěji využívají metod hloubkových rozhovorů, případových studií nebo experimentů. Většina článků využívá primární data, ale jsou i příspěvky založené na analýze sekundárních z různých databází sdružujících značky kvality potravin.

**Tabulka 1 Přehled významných studií o značkách kvality potravin za období 2003–2018**

Primární data		Přehledové studie
Kvantitativní design	Kvalitativní design	
Albuquerque et al., 2018 Bonano et al., 2018 Velčovská, 2018a; 2018b Bryla, 2017 Dias a Mendes, 2017 Košičiarová et al., 2016 Likudis, 2016 Meixner a Haas, 2016 Riivits-Arkonsuo et al., 2016 Roselli et al., 2017 Sepúlveda et al., 2016 Simeone et al., 2016 Velčovská a Klapilová Krbová, 2016 Chalupová, 2016 Rojík, 2016 Velčovská a Del Chiapa, 2015 Velčovská a Sadílek, 2014 Rijswijk a Frewer, 2006	Gracia a De-Magistris, 2016	Grunert a Aachmann, 2016 Klánová, 2016 Grunert, 2005

Zdroj: vlastní zpracování

## 4. Metodika práce

Kapitola 4. Metodika práce popisuje metody použité v disertační práci, zejména rozšiřuje článek s názvem Attitudes of Czech Consumers towards Food Quality Labels. V této kapitole jsou popsány cíle práce, uvedeny výzkumné otázky, popsán výběrový soubor a následně provedena analýza dat. Analýza primárních dat z terénního dotazování je doplněna sekundárními daty z projektu MML-TGI a následně jsou obě navržené segmentace propojeny v rámci kapitoly 4.4 Propojení se segmentací dle dat MML-TGI.

### 4.1. Cíle práce

Hlavním cílem výzkumu je zjistit postoje českých spotřebitelů k potravinám označeným značkami kvality potravin a vytvořit spotřebitelskou typologii založenou na postojích ke značkám kvality potravin.

Hlavní cíl práce byl rozpracován do níže uvedených dílčích cílů:

- 1) Zjistit asociace spotřebitelů s pojmem kvalitní výrobek v případě potravin a definovat faktory, podle kterých spotřebitelé identifikují kvalitní výrobek při nákupu na prodejně (kritéria výběru kvalitního výrobku).
- 2) Zjistit postoje k vybraným značkám kvality potravin.
- 3) Zjistit znalost vybraných značek kvality potravin na českém trhu.
- 4) Identifikovat rozdíly v postojích ke kvalitě a značkám kvality potravin mezi jednotlivými segmenty spotřebitelů.
- 5) Vytvořit typologii zákazníků založenou na postojích ke značkám kvality potravin a popsat sociodemografický profil a spotřebitelské chování jednotlivých typů spotřebitelů.

### 4.2. Výzkumné otázky

V návaznosti na cíle byly formulovány specifické výzkumné otázky (SVO):

**SVO1: Jaké je využití evropského systému značení potravin z hlediska kvality potravin v jednotlivých státech Evropské unie?**

Tato specifická výzkumná otázka je zodpovězena v příspěvcích Perception of Food Quality by Consumers – Literature Review a Importance of Food Quality Labels Included in the European Union Quality Schemes.

**SVO2: Jaké jsou přínosy regionálního značení potravin pro producenty a jak producenti vnímají regionální značky z hlediska kvality potravin?**

Specifická výzkumná otázka SVO2 je zodpovězena v příspěvku Benefits of Regional Food Quality Labels for Czech Producers.

**SVO3: Které značky potravin spotřebitelé znají?**

**SVO4: Je značka kvality faktorem, který spotřebitelé využívají při nákupu potravin pro rozpoznání kvalitního výrobku?**

**SVO5: Jak splňují potraviny označené značkami kvality očekávání zákazníků?**

**SVO6: Považují spotřebitelé potraviny označené značkami kvality za skutečně kvalitnější?**

**SVO7: Jsou značky kvality potravin důvěryhodné?**

**SVO8: Jsou zákazníci ochotni platit více za potraviny označené značkami kvality než za potraviny neoznačené?**

Posledních šest specifických výzkumných otázek je zodpovězeno v příspěvcích Attitudes of Czech Consumers towards Food Quality Labels a Consumer Preferences regarding Food Quality Labels: The Case of Czechia.

#### **4.3. Výběrový soubor**

Výzkum byl proveden s využitím primárních dat. Samotnému výzkumu předcházela pilotáž, během které bylo v období od prosince 2015 do ledna 2016 osloveno 36 respondentů, přičemž rozložení zhruba odpovídá rozložení sledovaných kategorií v populaci. V rámci pilotáže byl ověřen navržený dotazník, který byl použit v samotném výzkumu, který se konal od 18.2.2016 do 1.3.2016 na výběrovém souboru 444 respondentů. Zároveň byly rozhovory nahrávány za účelem případného kvalitativního vyhodnocení. Základní výsledky pro jednotlivé otázky jsou dostupné v příloze 2, tabulky 2.1 až 2.3.

Základní soubor tvořili všichni obyvatelé České republiky starší 18 let, výběrovým souborem pak byli respondenti osloveni před prodejnami potravin.

Výzkumnou technikou bylo osobní dotazování, kdy respondenti odpovídali na soubor 13 otázek

s uzavřenými a otevřenými otázkami a škálovými otázkami. Pro výběr respondentů byl zvolen systematický výběr, kdy respondenti byli dotazováni před prodejnami potravin, a technika vhodné příležitosti. Otázky byly zaměřeny na zjištění postojů respondentů k nákupu potravin označených značkami kvality a jejich znalosti značek kvality uváděných na potravinách prodávaných v České republice. Dále dotazník obsahoval segmentační otázky na velikost domácnosti, celkový čistý příjem respondentovy domácnosti, nejvyšší dosažené vzdělání respondenta a PSČ, na základě kterého byl identifikován region bydliště. Cílem dotazování bylo získat více odpovědí od žen, které mají na nákupní chování u potravin větší vliv a rozhodovací pravomoci než muži. Respondenti byli ochotni odpovídat na otázky a nebyl zaznamenán významnější počet respondentů, kteří by se zdráhali dotazování zúčastnit. Získaná data byla posléze zpracována a provedeno třídění prvního a druhého stupně, provedena korelační analýza.

**Tabulka 2 Charakteristika výběrového souboru (n = 444, hodnoty jsou uvedeny v %)**

Počet členů domácnosti	1	8,3	Celkový měsíční čistý příjem domácnosti (Kč)	Do 10 000	16,7
	2	22,3		10 001–20 000	19,4
	3	22,2		20 001–30 000	27,8
	4	22,2		30 001–40 000	13,9
	5	25,0		40 001–60 000	11,1
				Nad 60 000	11,1
Vzdělání	Základní	11,1	Věk	20–29 let	41,7
	Středoškolské bez maturity	16,7		30–39 let	19,5
	Středoškolské s maturitou	44,4		40–49 let	19,4
	Vyšší odborná škola	2,8		50–59 let	11,1
	Vysokoškolské	25,0		60 let	8,3
Pohlaví	Žena	63,9	Region	Praha a Středočeský kraj	63,8
	Muž	36,1		Plzeňský kraj	2,8
				Olomoucký kraj	33,4

Zdroj: vlastní zpracování

#### **4.3.1. Vytvoření typologie spotřebitelů na základě postojů ke značkám kvality potravin**

Postoje spotřebitelů jsou klasifikovány do tří skupin: (1) postoje k vybrané značce kvality, (2) postoje ke kritériím výběru (cena, přidaná hodnota, ekologické zpracování, lokální produkt, balení atd.) a (3) postoje k informačním zdrojům (význam informačních zdrojů, intenzita shromažďování informací, role referenčních skupin a postoje k nim, preference moderních technologií).

S využitím metody shlukové analýzy jsou z výběrového souboru respondentů vytvořeny tři shluky, které charakterizují postoje jednotlivých typů spotřebitelů. Shluky jsou nyní nazvány vyhledávající kvalitu, nepřemýšlející o kvalitě a impulzivně nakupující.

Pro shlukovou analýzu byla využita čtyři tvrzení respondentů měřená na pětistupňové škále s krajními hodnotami zcela souhlasím a zcela nesouhlasím (rozložení odpovědí pro tvrzení je v příloze 2, tabulka 2.4):

**T1: Potraviny označené značkami kvality splňují moje očekávání.**

**T2: Potraviny označené značkami kvality jsou skutečně kvalitnější.**

**T3: Značky kvality jsou důvěryhodné.**

**T4: Jsem ochotná/ý platit za potraviny označené značkami kvality více než za potraviny neoznačené.**

V prvním kroku byla spočítána korelační matice reprodukcující úroveň všech vzájemných vztahů uvnitř souboru ukazatelů. Vzhledem k charakteru vystupujících dat byl využit Spearmanův korelační koeficient, který je neparametrický a nevyžaduje normalitu dat s testováním na hladině významnosti 5 %. Cílem korelační analýzy bylo zjistit, zda a do jaké míry mezi sebou jednotlivé postojové otázky korelují. Dle požadavků na shlukovou analýzu by nezávisle proměnné neměly být mezi sebou příliš vysoce korelovány, neboť by byl porušen požadavek na absenci multikolinearity. Po prozkoumání bivariačních korelací lze konstatovat, že vzájemné korelace nejsou příliš vysoké (viz příloha 2, tabulka 2.5).

Do shlukové analýzy, která následovala v dalším kroku, byla zahrnuta všechna čtyři tvrzení. Posléze bylo provedeno hierarchické shlukování (Hierarchical Cluster Analysis) s využitím Wardovy metody a měření vzdáleností pomocí čtverců euklidovské vzdálenosti. Na základě rozdílů koeficientů bylo doporučeno vytvořit tři až čtyři shluky. S ohledem na náročnost interpretace, velikost výběrového souboru, rozdílů koeficientů (tabulka 3) a počet prvků v jednotlivých shlucích bylo s využitím Wardovy metody rozhodnuto o vytvoření tří shluků,

kteře jsou poměrně počty prvků srovnatelné (jeden větší a dva menší shluky).

**Tabulka 3 Aglomerační tabulka shluků spotřebitelů dle postojů ke značkám kvality**

Aglomerační tabulka						
Krok	Shluk 1	Shluk 2	Koeficienty	Krok, kdy se shluk poprvé objeví		Další krok
321	2	8	6821,481	Shluk 1	Shluk 2	
322	5	10	7402,460	320	317	334
323	3	7	7956,306	326	325	334
333	1	5	8637,366	328	330	335
334	2	3	9335,497	331	332	335
335	1	2	10328,478	333	334	0

Zdroj: vlastní zpracování

Tři shluky, které charakterizují postoje jednotlivých typů spotřebitelů, jsou nazvány vyhledávající kvalitu, nepřemýšlející o kvalitě a impulzivně nakupující.

Zastoupení shluků je uvedeno v tabulce 4, kdy největší je shluk nepřemýšlející o kvalitě, do kterého bylo zařazeno 48,3 % respondentů, poté následují dva podobně velké shluky impulzivně nakupující s 26,2 % respondentů a vyhledávající kvalitu, který zahrnuje 25,5 % respondentů.

**Tabulka 4 Relativní zastoupení shluků**

Shluk	Název shluku	Počet respondentů	% respondentů
<b>Shluk 1</b>	Vyhledávající kvalitu	113	25,5
<b>Shluk 2</b>	Nepřemýšlející o kvalitě	215	48,3
<b>Shluk 3</b>	Impulzivně nakupující	116	26,2

Zdroj: vlastní zpracování

Existence statisticky významných rozdílů mezi shluky byla ověřena pomocí Kruskal-Wallis testu, přičemž vhodnost tohoto testu byla předem ověřena Shapiro-Wilk testem normality, který prokázal, že není splněn předpoklad normality dat (viz příloha 2, tabulka 2.6). Nulová hypotéza Kruskal-Wallis testu  $H_0$  byla formulována jako neexistence rozdílů v mediánech mezi testovanými skupinami a alternativní hypotéza  $H_1$  předpokládala, že mezi testovanými

skupinami existují rozdíly v mediánech (viz příloha 2, tabulka 2.7). Hodnoty koeficientu Eta vykazují relativně silnou až silnou asociaci mezi sledovanými proměnnými (viz příloha 2, tabulka 2.8).

Na základě výsledků testu přijímáme u všech tvrzení alternativní hypotézu  $H_1$  a mezi shluky existují statisticky významné rozdíly v mediánech.

**Tabulka 5 Kruskal-Wallis test pro všechny shluky**

Tvrzení	T1	T2	T3	T4
Chí-Square	60,821	84,774	102,806	62,764
Df	2	2	2	2
Asymp. Sig	0,000	0,000	0,000	0,000

Zdroj: vlastní zpracování

Respondenti ze shluku nepřemýšlející o kvalitě hodnotili všechna tvrzení podprůměrně (průměrné hodnoty byly od 2,43 do 2,92), s benefity značek spíše nesouhlasí a informace o značkách vnímají jako nedostatečné. Opakem je shluk vyhledávající kvalitu, kde jsou hodnoty odpovědí u jednotlivých tvrzení nejvyšší (od 3,79 do 4,09). U třetího segmentu impulzivně nakupující byly hodnoty odpovědí u jednotlivých tvrzení v intervalu od 3,13 do 3,76.

**Tabulka 6 Popisné statistiky pro jednotlivé shluky**

		T1	T2	T3	T4
<b>Vyhledávající kvalitu</b>	Mean	3,84	3,89	3,79	4,09
	N	113	113	113	113
	Std. Dev.	0,56	0,60	0,63	0,28
	Median	4,00	4,00	4,00	4,00
	Min	1	2	2	4
	Max	5	5	5	5
<b>Nepřemýšlející o kvalitě</b>	Mean	2,92	2,84	2,78	2,43
	N	215	215	215	215
	Std. Dev.	0,49	0,44	0,53	0,90
	Median	3,00	3,00	3,00	2,00
	Min	2	2	2	1
	Max	4	4	4	4
<b>Impulzivně nakupující</b>	Mean	3,76	3,63	3,66	3,13
	N	116	116	116	116
	Std. Dev.	0,49	0,67	0,67	1,12
	Median	4,00	4,00	4,00	3,00
	Min	2	2	2	1
	Max	4	4	4	5

Zdroj: vlastní zpracování

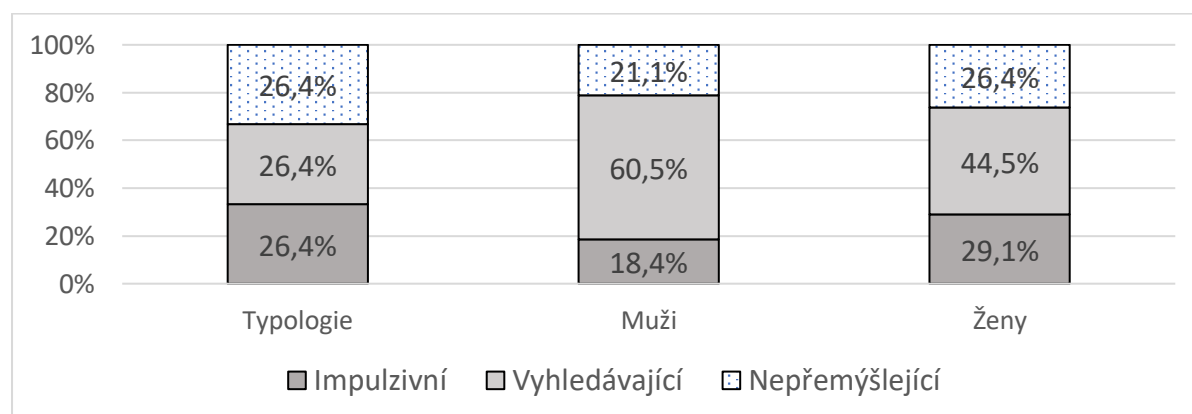


#### 4.3.2. Zastoupení shluků v sociodemografických charakteristikách spotřebitelů

Poté, co byly identifikovány shluky spotřebitelů na základě jejich postojů ke značkám kvality potravin a k informacím o těchto značkách, bylo zjišťováno, jak jsou tyto shluky zastoupeny ve vybraných sociodemografických skupinách spotřebitelů (viz příloha 2, tabulka 2.9). K ověření statisticky významných rozdílů mezi shluky bylo využito statistické testování. Pro proměnné pohlaví, vzdělání, velikost domácnosti a čistý příjem domácnosti byl využit chí-kvadrát test nezávislosti. Nulová hypotéza  $H_0$  byla definována jako neexistence statisticky významných rozdílů mezi testovanými skupinami a alternativní hypotéza  $H_1$  jako předpoklad, že mezi skupinami existují statisticky významné rozdíly. Na základě provedeného chí-kvadrát testu byly prokázány statisticky významné rozdíly mezi vytvořenou typologií spotřebitelů a vzděláním ( $\text{sig} = 0,04$ ) a věkem ( $\text{sig} = 0,005$ ). Pohlaví ( $\text{sig} = 0,316$ ), velikost domácnosti ( $\text{sig} = 0,451$ ) a příjmová skupina ( $\text{sig} = 0,285$ ) nemají statisticky významný vliv; vše na hladině pravděpodobnosti  $p = 0,05$ .

Jak je vidět na obrázku 2 mezi muži je 18,4 % impulzivních nakupujících, 60,5 % vyhledávajících kvalitu a 21,1 % spotřebitelů nepřemýšlejících o kvalitě. U žen je 29,1 % ze segmentu impulzivně nakupujících, 44,5 % vyhledávajících kvalitu a 26,4 % spotřebitelek nepřemýšlejících o kvalitě, viz obrázek 2. Na základě provedeného chí-kvadrát testu však nemůžeme potvrdit statisticky významný rozdíl mezi pohlavím spotřebitelů.

**Obrázek 2 Zastoupení shluků mezi muži a ženami**

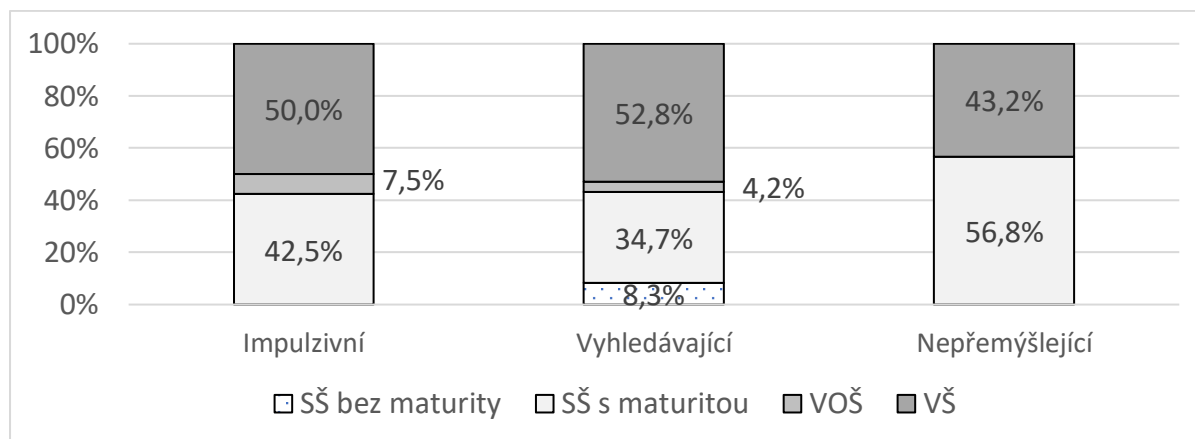


Zdroj: vlastní zpracování

Struktura vzdělanostních skupin spotřebitelů se u jednotlivých shluků příliš neliší. Jedinou výjimkou je zastoupení respondentů se střední školou bez maturity v segmentu vyhledávajících kvalitu. Dále je u segmentu spotřebitelů nepřemýšlejících o kvalitě vyšší podíl respondentů se

střední školou než u segmentu impulzivně nakupujících. To je také vidět na obrázku 3. Tyto rozdíly jsou statisticky významné ( $\text{sig} = 0,04$ ).

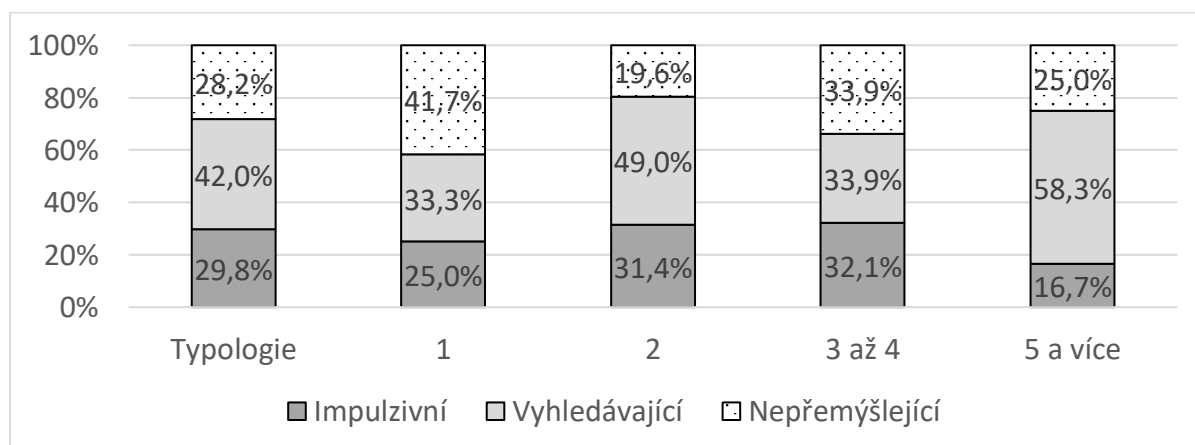
**Obrázek 3 Zastoupení shluků ve vzdělanostních skupinách spotřebitelů**



Zdroj: vlastní zpracování

Zajímavé je také zjištění, že největší podíl spotřebitelů vyhledávajících kvalitu potravin označených značkami kvality je ve skupině dvoučlenných a vícečlenných (5 a více) domácností. Nejvíce respondentů ze segmentu nepřemýšlejících o kvalitě je pak ve dvoučlenných a tříčlenných až čtyřčlenných domácnostech, viz obrázek 4. Velikost domácnosti také není signifikantním faktorem ( $\text{sig} = 0,451$ ).

**Obrázek 4 Zastoupení shluků ve velikosti domácnosti spotřebitelů**

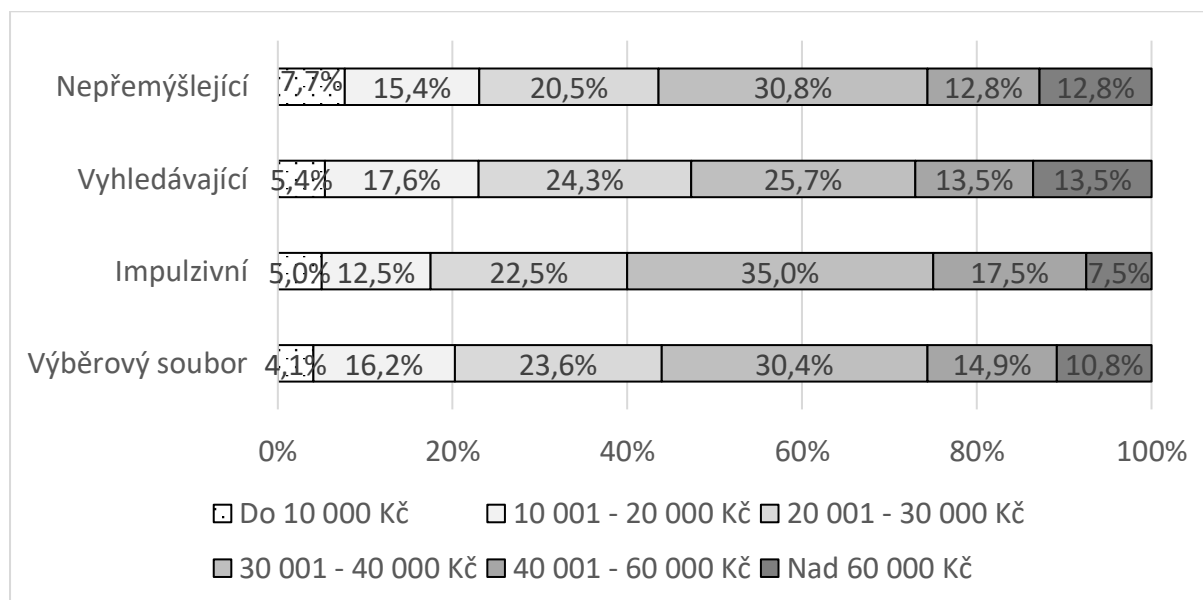


Zdroj: vlastní zpracování

V kategorii příjmové skupiny domácnosti respondenta je vidět, že respondenti s nejvyšším čistým příjmem v domácnosti (60 000 Kč) jsou nejčastěji v segmentu vyhledávajících kvalitu

(13,5 %) a nejméně často v segmentu impulzivně nakupujících (7,5 %). Naopak nejvíce respondentů s čistými příjmy pod 20 000 Kč je ve skupině nepřemýšlejících o kvalitě (obrázek 5). Ani čistý příjem domácnosti není statisticky významným faktorem ( $\text{sig} = 0,285$ ).

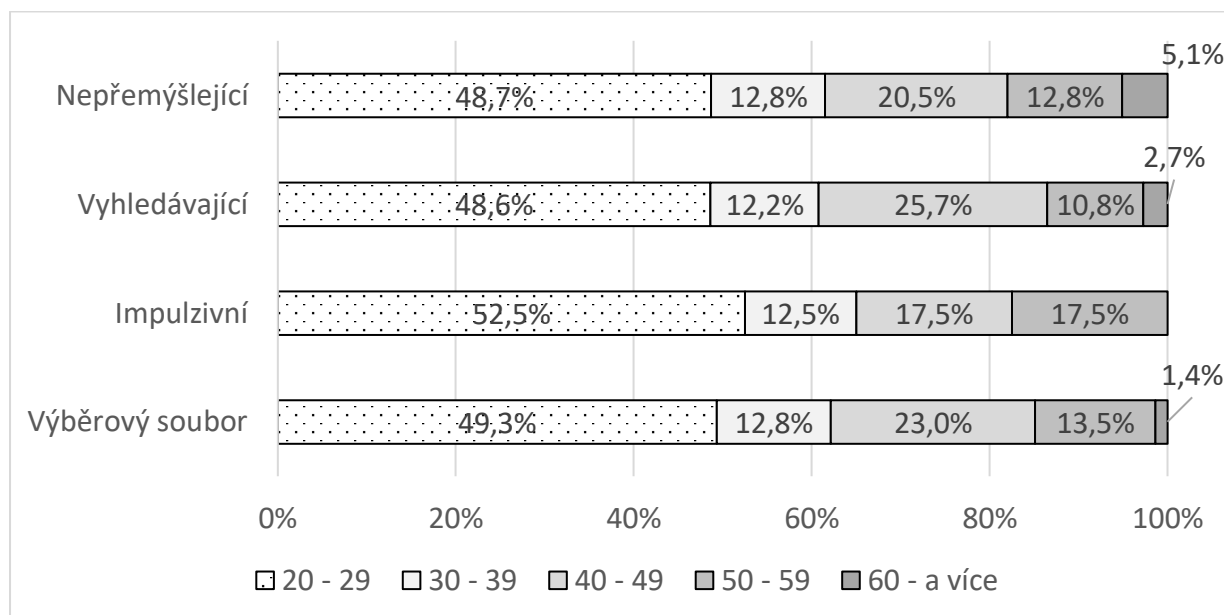
**Obrázek 5 Zastoupení shluků v příjmových skupinách domácnosti spotřebitelů (čistý příjem domácnosti)**



Zdroj: vlastní zpracování

Jestliže mezi předchozími sociodemografickými charakteristikami a vytvořenou typologií žádný statisticky významný vztah neexistuje, tak mezi věkem respondenta a typologií je statisticky významný vztah ( $\text{sig} = 0,005$ ). Segment vyhledávajících kvalitu má největší podíl respondentů ve věku 40–59 let, a naopak největší počet nejmladších respondentů je v segmentu impulzivně nakupujících. Nejvíce vyvážený je segment nepřemýšlejících o kvalitě a až na malé odchylky kopíruje rozložení respondentů ve výběrovém souboru (obrázek 6).

**Obrázek 6 Zastoupení shluků ve věkových skupinách domácnosti spotřebitelů**



Zdroj: vlastní zpracování

#### 4.3.3. Shrnutí vytvořené segmentace

S využitím shlukové analýzy a Wardovy metody byl stanoven ideální počet tří shluků, a to na základě počtu prvků ve shlucích a odlišnostech jednotlivých shluků na základě Kruskal-Wallis testu.

S ohledem na postoje respondentů z jednotlivých shluků ke značkám kvality byly shluky pojmenovány nepřemýšlejší o kvalitě, impulzivně nakupující a vyhledávající kvalitu. Shluky se dále liší na základě sociodemografických charakteristik vzdělání, věku, pohlaví, velikosti domácnosti a čistého příjmu domácnosti.

Do segmentu nepřemýšlejších o kvalitě patří 215 respondentů a jde o skoro polovinu všech dotázaných (48,3 %). Jejich postoje ke značkám kvality mají statisticky významně nižší průměrné hodnoty ( $\text{sig} = 0,00$ ) než segment vyhledávajících kvalitu (průměrné hodnoty jsou na intervalu od 2,43 do 2,92). Stejně jako u segmentu vyhledávajících kvalitu je pro segment nepřemýšlejších o kvalitě důležitá dřívější zkušenost s produktem, ale mnohem důležitější je kritérium ceny, které se nejčastěji umístilo na prvním místě. Další důležitá kritéria jsou složení a čerstvost. Značka kvality se většinou umístila na třetím místě. Spotřebitelé ze segmentu nepřemýšlejších o kvalitě rovněž uváděli nižší spontánní znalost značek kvality na českém trhu, kdy dominantní místo zaujímá značka kvality Klasa. Zajímavé je také zjištění, že žádný

respondent z tohoto segmentu nezná evropský systém značení kvality potravin (značky Chráněné označení původu, Chráněné zeměpisné označení a Tradiční zaručená specialita). Nejčastěji se v tomto segmentu objevují ženy, spotřebitelé se středoškolským vzděláním s maturitou, buď žijící v jednočlenné domácnosti nebo ve tří- až čtyřčlenné domácnosti a většina spotřebitelů má čistý příjem domácnosti do 40 000 Kč měsíčně. Věk spotřebitelů pak kopíruje věk respondentů z výběrového souboru.

Segment s názvem impulzivně nakupující má 116 respondentů a tvoří tak 26,2 % výběrového souboru. Jde o spotřebitele, kteří považují za nejdůležitější kritérium výběru cenu a dále složení výrobku. Na rozdíl od dalších segmentů impulzivně nakupující spotřebitelé uvádějí jako jedno z kritérií nákupu také aktuální chuť nebo preferenci v době nákupu. Znalost značek kvality potravin je vyšší než u segmentu nepřemýšlejících o kvalitě a nejčastěji ze všech segmentů byly zmiňovány značky kvality BIO a Český výrobek. Očekávání spotřebitelů tohoto segmentu od značek kvality spočívají v tom, že produkt bude BIO a nebude obsahovat chemické látky. Nejčastěji jsou to ženy, vzdělání v tomto případě nehraje roli, protože podíl středoškolsky a vysokoškolsky vzdělaných respondentů je podobný. Zastoupení tohoto segmentu dle velikosti domácnosti nevykazuje velké rozdíly, s výjimkou pětičlenných domácností, kde je výrazně nižší než jinde (u jedno- až čtyřčlenných domácností je tento segment zastoupen 25–32,1 %). V rámci tohoto segmentu jsou nejčastěji zastoupeny domácnosti s čistým příjmem mezi 30 000–40 000 Kč měsíčně a nejčastěji jde o mladé spotřebitele ve věku do 29 let.

Segment vyhledávající kvalitu zahrnuje 113 respondentů z výběrového souboru. Postoje respondentů z tohoto segmentu vůči značkám kvality potravin jsou pozitivní; průměrná hodnota odpovědí na pětistupňové škále činí pro čtyři výše uvedená tvrzení 3,79–4,09. Faktory, které ovlivňují nákup potravin tímto segmentem, jsou předchozí pozitivní zkušenost se značkami kvality, složení a původ potraviny. Cena jako faktor výběru se objevuje většinou až jako třetí možnost odpovědi. Tito spotřebitelé rovněž deklarovali nejvyšší spontánní znalost značek kvality potravin na českém trhu. Očekávání spotřebitelů ze segmentu vyhledávající kvalitu u potravin označených značkami kvality jsou lepší složení, původ, chuť, čerstvost a také splnění norem pro výrobu potraviny. Ve srovnání s celkovou strukturou výběrového souboru je v tomto segmentu vyšší počet mužů, vysokoškolsky vzdělaných spotřebitelů, dvou- a pětičlenných domácností, s nadprůměrnými příjmy a ve věku nad 40 let.

#### 4.4. Porovnání se segmentací dle dat MML-TGI

Pro úplnost bylo provedeno porovnání segmentů vytvořených na základě dotazování respondentů se segmenty vytvořenými pomocí projektu Market & Media & Lifestyle-TGI (dále jen MML-TGI) s využitím nástroje DataAnalyzer. Projekt MML-TGI zahrnuje reprezentativní data, která je možné extrapolovat na 8 794 950 spotřebitelů české populace ve věku 12–80 let, jejichž sociodemografické charakteristiky jsou pro základní postižení celkových relací uvedeny níže v tabulce 7. Analýza pro odkrytí segmentů nebude omezena žádnou cílovou skupinou, tudíž zmíněná tabulka popisuje i charakteristiku výběrového souboru.

**Tabulka 7 Deskriptivní charakteristiky výběrového souboru (n = 15 020, v %)**

<b>Pohlaví respondenta</b>	Muž	49,6	<b>Region</b>	Praha	11,7
	Žena	50,4		Střední Čechy	12,8
<b>Věk respondenta</b>	12-15 let	2,5		Jižní Čechy	6,8
	16-24 let	13		Západní Čechy	8
	25-34 let	17		Severní Čechy	11,4
	35-44 let	21		Východní Čechy	10,8
	45-54 let	14		Jižní Morava	20,7
	55-64 let	17		Severní Morava	17,7
	65-79 let	16	<b>Národní socioekonomická klasifikace</b>	A - nejvyšší	13,8
<b>Vzdělání respondenta</b>	Základní	20,9		C	17,3
	vyučen / SŠ bez maturity	34,0		D	21,9
	středoškolské s maturitou	30,0		E1	12,2
	vysokoškolské	15,5		E2	3,5
				E3 - nejnižší	2,5

Zdroj: MML-TGI ČR 2016 1. - 4. kvartál SPOJENÁ (11.01.2016 - 18.12.2016), CS: CS Všichni

#### Faktorová analýza

Dalším krokem bylo provedení faktorové analýzy s cílem redukovat množství proměnných bez opakujících se informací. Tvzení respondentů projektu MML-TGI týkající se vztahu respondentů ke kvalitě a značce jako kritériu výběru byla vybrána pro tuto analýzu. Použitá data však obsahují vstupní proměnné s nevhodně uspořádanými kategoriemi a s opakujícími se informacemi. Z tohoto důvodu bylo provedeno rekódování proměnných, aby byly následně získány vstupní proměnné s vhodně uspořádanými kategoriemi. Rekódování proměnných se provádí za účelem sjednocení vah jednotlivých odpovědí a pro snazší logickou interpretaci. V

rámci rekódování došlo i k očištění dat o odpovědi typu „neuvedeno“, což jsou chybějící hodnoty, které mohou zkreslit uspořádání hodnot a přitom dále nevstupují do výpočtu pokročilých analýz.

Do faktorové analýzy bylo nakonec vybráno 14 tvrzení, kterými je možné vysvětlit co největší část původních proměnných (viz příloha 2, tabulka 2.10). Tato tvrzení byla vybírána z projektu MML-TGI podle toho, zda jako součást daného tvrzení je uvedena kvalita a/nebo značka jako kritérium výběru pro respondenty. Výstupem analýzy bylo získání pěti faktorů, které vysvětlují větší množství dat, kdy je na jejím základě získáno méně proměnných bez opakuujících se informací. Vybrané výroky respondentů byly zařazeny do faktorové analýzy, díky níž se zmenšilo množství proměnných, které nicméně dokáží vysvětlit co největší část původních proměnných. V rámci faktorové analýzy bylo postiženo pět faktorů (vzájemné závislosti mezi původními proměnnými) s hodnotou vlastního čísla (eigenvalue) větší než 1, které vysvětlily 61,84 % celkového rozptylu. To je také uvedeno v tabulce 8.

Všechny proměnné měly hodnoty faktorových zátěží vyšší než 0,4, což je obecně přijímaná minimální faktorová zátěž tak, aby bylo možné s jistotou interpretovat příslušnost otázky k danému faktoru (viz příloha 2, tabulka 2.11). Dle doporučení Fielda (2013) byly rovněž prověřeny korelace vstupních proměnných pro vyloučení multikolinearity, a to kontrolou vzájemných korelací, které v žádném z případů nepřekročily kritickou hranici  $r = 0,8$  (viz příloha 2, tabulka 2.12). Po těchto úpravách a kontrolách bylo v modelu ponecháno původních 14 tvrzení, pro které byla znovu provedena faktorová analýza. Počet pozorování byl více než 40 krát větší než počet proměnných, a proto naplnil obecně přijímané pravidlo velikosti vzorku při faktorové analýze, které hovoří minimálně o šestinásobku (Fabrigar et al., 1999). Faktorová analýza proběhla na projekci 15 020 jednotlivců, kdy s platnými faktorovými skóry bylo 12 875 (s nedefinovanými faktorovými skóry pak 2 145). To můžeme považovat za dostatečné množství, aby mohla být faktorová analýza dále brána v úvahu.

**Tabulka 8 Vysvětlený celkový rozptyl**

MML-TGI ČR 2016 1. - 4. kvartál SPOJENÁ (11.01.2016 - 18.12.2016)	Počáteční vlastní čísla			Nezrotované faktory			Zrotované faktory			
CS: CS Všichni	vl. č.	% rozpt.	kum. %	SS f. zátěží	% rozpt.	kum. %	SS f. zátěží	% rozpt.	kum. %	
Vysvětlený celkový rozptyl										
Projekce na jednotlivce, Váženo										
	Číslo faktoru									
	1	3,665	26,18	26,18	3,665	26,18	26,18	2,301	16,44	16,44
	2	1,574	11,24	37,42	1,574	11,24	37,42	1,926	13,76	30,19
	3	1,287	9,2	46,62	1,287	9,2	46,62	1,619	11,56	41,76
	4	1,13	8,07	54,69	1,13	8,07	54,69	1,464	10,46	52,22
	5	1,001	7,15	61,84	1,001	7,15	61,84	1,348	9,63	61,84
	6	0,911	6,51	68,35	—	—	—	—	—	—
	7	0,741	5,29	73,65	—	—	—	—	—	—
	8	0,644	4,6	78,25	—	—	—	—	—	—
	9	0,579	4,14	82,38	—	—	—	—	—	—
	10	0,569	4,06	86,45	—	—	—	—	—	—
	11	0,535	3,82	90,27	—	—	—	—	—	—
	12	0,473	3,38	93,65	—	—	—	—	—	—
	13	0,461	3,3	96,95	—	—	—	—	—	—
	14	0,428	3,05	100	—	—	—	—	—	—

Zdroj: MML-TGI ČR 2016 1. - 4. kvartál SPOJENÁ (11.01.2016 - 18.12.2016), CS: CS Všichni

Finálním krokem analýzy dat je porovnání jednotlivých charakteristik respondentů s výsledky faktorové analýzy. Tento krok umožní popsat, ve kterých konkrétních spotřebitelských skupinách hrají nalezené faktory statisticky významnou roli. Nejdříve je nutné provést analýzu rozptylu ANOVA u všech faktorových skóre v porovnání s použitými proměnnými: vzdělání, pohlaví a věk. Výsledky jsou zobrazeny v tabulce 9. U všech sledovaných faktorů existuje statisticky významný rozdíl s vybranou proměnnou. U faktoru kvalitnější je dražší je to pohlaví, u loajality ke značce kvality a Brand Awareness je to věk a vzdělání, u faktoru vyhledávání informací vzdělání a konečně u preferuji značky to je věk.



**Tabulka 9 Analýza rozptylu pro vliv vzdělání, pohlaví a věku na jednotlivé faktory**

	Faktory				
	Kvalitnější je dražší	Loajalita ke značce kvality	Brand Awareness	Vyhledávání informací	Preferuji značky
<b>Věk</b>	,372	,001*	,006*	,298	,001*
<b>Pohlaví</b>	,022*	,324	,058	,161	,799
<b>Vzdělání</b>	,206	,001*	,007*	,001*	,170

Zdroj: vlastní výpočet; \* p = 0.05

Dalším krokem bylo zrotování faktorů na základě tvrzení, která do faktorové analýzy vstupovala (celkem 14 otázek). Nově vytvořené faktory jsou pracovně pojmenovány tak, aby co nejlépe charakterizovaly postoje respondentů, které jsou pro daný faktor nejvíce typické. Zrotovaná faktorová matice je uvedena v tabulce 10, v níž jsou skryty faktorové zátěže s hodnotou menší než 0,4.

**Tabulka 10 Zrotovaná faktorová matice**

MML-TGI ČR 2016 1. - 4. kvartál SPOJENÁ (11.01.2016 - 18.12.2016)		Faktory				
CS: CS Všichni		Kvalitnější je dražší	Loajalita ke značce kvality	Brand Awareness	Vyhledávání informací	Preferuji značky
<b>Zrotovaná faktorová matice</b>						
<b>Projekce na jednotlivce, Váženo</b>						
	011 Značkové zboží je zárukou kvality.	0,781				
	028 Vyšší cena garantuje vyšší kvalitu zboží.	0,724				
	038 Kvalitní zboží je vždy dražší.	0,675				
	021 Pokud najdu vyhovující značku, neměním ji.		0,682			
	015 Za kvalitní zboží jsem ochoten zaplatit více.		0,606			
	979 Vyplatí se připlatit si za kvalitní produkt.		0,605			
	022 Kupuji pouze velmi kvalitní výrobky.		0,518			
	879 Když objevím značku, která mi vyhovuje (která se mi líbí), mám tendenci u ní setrvat.			0,764		
	880 Myslím, že dobře známé značky jsou lepší.			0,706		
	878 Když vidím novou značku, často ji koupím, abych viděl(a), jaká je.			0,604		
	029 Rád(a) zkouším nové značky výrobků.				0,746	
	030 Čtu si údaje na obalech výrobků.				0,727	
	008 Při nákupu se řídím pouze druhem zboží, nezáleží mi na značce.				0,652	
	001 Dávám přednost značkovému zboží.					0,641

Zdroj: MML-TGI ČR 2016 1. - 4. kvartál SPOJENÁ (11.01.2016 - 18.12.2016), CS: CS Všichni

## Shluková analýza

Díky faktorové analýze bylo získáno méně proměnných bez opakujících se informací. Dalším krokem je proto provedení shlukové analýzy. Během provádění výpočtů shlukové analýzy byly zpracovány možnosti se čtyřmi, třemi a dvěma segmenty, které byly dále porovnány. Bylo rozhodnuto, že nejvhodnější bude dále pracovat se shlukovou analýzou obsahující tři shluky, které splňují požadavek na srovnatelnou velikost shluků, viz tabulka 11.

**Tabulka 11 Velikost shluků**

MML-TGI ČR 2016 1. - 4. kvartál SPOJENÁ (11.01.2016 - 18.12.2016)			
CS: CS Všichni			
Velikosti shluků			Prj 000
Projekce na jednotlivce, Váženo			
	Shluky		
		Neutrální	2509
		Vyhledávající	2318
		Lhostejní	2705

Zdroj: MML-TGI ČR 2016 1. - 4. kvartál SPOJENÁ (11.01.2016 - 18.12.2016), CS: CS Všichni

V rámci shlukové analýzy došlo k pojmenování jednotlivých shluků dle společných znaků. Názvy jsou však pouze pracovní, jejich konečné znění se potvrzuje až po zevrubnějších kontingčních analýzách v rámci rozvoje profilu shluků - segmentů a měly by co nejvíce reflektovat typické rysy každého segmentu. Stanovené názvy shluků jsou uvedeny níže v tabulce 12, ze které je taktéž zřejmé, zda je faktor pro daný shluk podstatný či naopak méně důležitý. Názvy shluků zní neutrální, vyhledávající a lhostejní.

Segment neutrálních spotřebitelů zahrnuje 33,3 % respondentů a jde nejčastěji o ženy do 34 let bydlící v Praze a ve Středních Čechách. Jde o spotřebitele, kteří jsou podprůměrně loajální ke značkám a kvalita a značka kvality pro ně není hlavním kritériem výběru. Často značky mění a rádi zkoušejí nové. Domnívají se také, že cena může být jedním z indikátorů kvality.

Opakem vyhledávajících jsou lhostejní (35,9 % respondentů ve výběrovém souboru). Tito spotřebitelé jsou nejčastěji ve věkové kategorii do 34 let a pak od 55 let a žijí ve Východních a Západních Čechách. Ve většině tvrzení vykazují podprůměrné hodnoty odpovědí a např. se nedomnívají, že by vyšší cena měla znamenat vyšší kvalitu produktu a také nejsou ochotni si za kvalitnější potraviny připlatit. Rovněž vykazují podprůměrnou loajalitu ke značce. Dalo by se říci, že pro tento segment spotřebitelů hrají kvalita a značky kvality velmi malou důležitost při výběru produktu a jde o spotřebitele primárně zaměřené na nákup produktů s co nejvhodnější cenou.

**Tabulka 12 Pojmenování shluků**

MML-TGI ČR 2016 1. - 4. kvartál SPOJENÁ (11.01.2016 - 18.12.2016)		Shluky		
CS: CS Všichni		Neutrální	Vyhledávající	Lhostejní
Výsledné středy shluků				
Projekce na jednotlivce, Váženo				
	001 Dávám přednost značkovému zboží.	3,640	3,613	2,426
	008 Při nákupu se řídím pouze druhem zboží, nezáleží mi na značce.	2,346	2,922	2,821
	011 Značkové zboží je zárukou kvality.	3,376	3,300	2,160
	015 Za kvalitní zboží jsem ochoten zaplatit více.	2,378	3,225	2,000
	021 Pokud najdu značku, která mi vyhovuje, neměním ji.	2,056	3,161	2,260
	022 Kupuji pouze velmi kvalitní výrobky.	2,999	3,403	2,394
	028 Vyšší cena garantuje vyšší kvalitu zboží.	3,822	3,496	2,362
	029 Rád(a) zkouším nové značky výrobků.	3,409	3,363	2,475
	030 Čtu si údaje na obalech výrobků.	2,561	3,274	2,570
	038 Kvalitní zboží je vždy dražší.	2,790	3,115	2,035
	878 Když vidím novou značku, často ji koupím, abych viděl(a), jaká je.	4,077	3,882	3,068
	879 Když objevím značku, která mi vyhovuje (která se mi líbí), mám tendenci u ní setrvat.	1,982	3,296	2,186
	880 Myslím, že dobře známé značky jsou lepší.	2,880	3,507	2,217
	979 Vyplatí se připlatit si za kvalitní produkt.	2,248	3,183	2,008

Zdroj: MML-TGI ČR 2016 1. - 4. kvartál SPOJENÁ (11.01.2016 - 18.12.2016), CS: CS Všichni

## 5. Návrhy a doporučení

V kapitole 5. Návrhy a doporučení jsou formulovány návrhy a doporučení vyplývající z výsledků realizovaného výzkumu postojů českých spotřebitelů ke značkám kvality potravin a příspěvcích prezentovaných v této práci. Nejprve je diskutována možnost využití typologie spotřebitelů a dále jsou uvedena doporučení ke zvýšení znalosti značek kvality, ke zvýšení důvěry ve značky a jejich hodnoty pro spotřebitele. Na základě obou analýz (primární data i databáze MML-TGI) vyplynulo, že na českém trhu potravin je možné pracovat se třemi segmenty spotřebitelů, přičemž rozdíly mezi segmenty nevyplývají jen ze sociodemografických charakteristik, ale zejména z rozdílů v postojích ke značkám kvality potravin. Proto je pro positioning produktu či značky vhodnější využít právě postojovou segmentaci, než je třídění podle sociodemografického profilu. Z vyhodnocení specifických výzkumných otázek dále vyplynulo, že je nutné zvýšení znalosti značek kvality potravin a také zlepšení postojů spotřebitelů ke značkám kvality. V dalších kapitolách jsou uvedena doporučení v jednotlivých oblastech.

### Využití spotřebitelské typologie

Podle vyhodnocení otázek je počet značek kvality na českém trhu potravin příliš vysoký a nepřehledný. Počet značek kvality by měl být snížen a lépe strukturován, aby bylo na první pohled jasné, co daná značka kvality zaručuje a kdo ji uděluje. Dále je nutné zamezit tomu, aby se na trhu potravin vyskytovaly dvě značky kvality, které mají skoro stejný název (Český výrobek versus Český produkt). Proto také téměř nikdo z respondentů nebyl schopen rozlišit mezi těmito dvěma značkami. Jak již bylo zmíněno, klíčová je pozice značky kvality Klasa, kterou by bylo třeba dále rozvíjet a rozhodnout, jakou strategii by měla mít do budoucna. Vysoký počet značek kvality má ve výsledku negativní efekt, protože spotřebitelé se mezi značkami kvality neorientují, neznají jejich význam a neví, co přesně značky garantují.

Pokud bychom měli definovat obecná doporučení pro zvýšení znalosti značek kvality potravin, je nutné, aby značky byly srozumitelné, jednoznačné, důvěryhodné, s jasnými, a přitom přiměřeně přísnými kritérii pro jejich udělení. V praktickém doporučení může být českému trhu inspirací rakouský systém značek kvality, který je strukturován do tří stupňů: na značky evropské (Chráněné označení původu, Chráněné zeměpisné označení a Tradiční zaručená specialita), národní (např. AMA Gütesiegel Austria či Austria BIO garantie) a regionální (např. Echt aus Niederösterreich, Niederösterreich-Genuss region Österreich, či Gutes von Bauernhof). Mezi těmito třemi stupni dokáže spotřebitel jasně rozlišovat, a navíc je i udělení

značky zcela průkazné. Další možností ke zvážení je využít pozitivního vnímání značky kvality Klasa, udělat z této značky deštníkovou značku a některé značky kvality pod ni zahrnout. Tím by se využilo pozitivní reputace značky kvality Klasa i pro ostatní značky, které samostatně mají jen malý vliv na spotřebitelské rozhodování. Pod deštníkovou značku kvality Klasa by bylo velmi vhodné zahrnout značky, které zaručují kvalitativní charakteristiky výrobku (např. Český výrobek – garantováno Potravinářskou komorou ČR, Czech Made či Fér potravina).

Dále je nutné doplnit, že značky kvality potravin deklarují splnění různých kritérií, čímž se vzájemně liší. Např. značka kvality Klasa deklaruje nadstandardní kvalitu potravinářských výrobků a použití kvalitních surovin. Značka Česká potravina garantuje český původ, použití lokálních surovin a tradiční způsob výroby. Značka Zdravá potravina se zaměřuje na zdravotní aspekty (vyvážené nutriční hodnoty, omezení přídavných látek a konzervantů). A např. značka Bio – produkt ekologického zemědělství potvrzuje to, že potravina pochází z kontrolovaného systému ekologického zemědělství. Rovněž vybrané značky kvality zaručující původ výrobku je možné zařadit pod deštníkovou značku kvality Klasa, např. Česká potravina či Český výrobek (ta je ovšem určena i pro nepotravinářské výrobky).

### **Doporučení ke zvýšení znalosti značek kvality**

Tato doporučení jsou směřována jak na správce značek, tak na správce certifikovaných produktů, protože vyšší znalost značek kvality znamená pravidelné a vědomé nákupy takto označených potravin, což může výrobcům přinést vyšší tržby, loajalitu a spokojenost zákazníků. Spotřebitel pak vnímá takového výrobce pozitivněji a je posilován vztah mezi výrobcem a spotřebitelem.

Cílem jak správců značek, tak výrobců by mělo být zvýšení informovanosti o značkách kvality, což by se následně pozitivně projevilo na znalosti těchto značek. Správci a výrobci by se měli zaměřit na vysvětlení tohoto pojmu spotřebiteli a následné uvedení, co znamenají již konkrétní značky kvality, kterých je na českém trhu velké množství a spotřebitelé se v nich často neorientují.

Znalost evropských značek není příliš vysoká, převážně se jedná o značky evropského systému kvality, které nejsou rozpoznávány, a jejich význam není jasný. Potraviny označené těmito značkami musí mnohdy splňovat přísnější kritéria než u značek národních a toto by se mělo dostat do povědomí spotřebitelů. Např. v roce 2013 byla za tímto účelem spuštěna kampaň „Kvalitní evropský výrobek“, jež je financována z prostředků EU a České republiky. Bylo by vhodné provedením marketingového výzkumu zjistit, zda ji vůbec spotřebitelé zaregistrovali,

zdali má tato kampaň již nějaké výsledky a na základě výzkumu určit, jestli je vhodné pokračovat ve stávající marketingové komunikaci nebo ji změnit.

Doporučení je vhodné zaměřit na jednotlivé segmenty spotřebitelů. V segmentu vyhledávajících kvalitu jsou postoje spotřebitelů ke značkám kvality potravin příznivé, značka kvality je jedním z výběru produktu v průběhu nákupního rozhodovacího procesu, a proto je nutné zaměřit se spíše na zvýšení znalosti značek kvality.

Odpovědi segmentu nepřemýšlejících o kvalitě vykazují podprůměrné hodnoty postojů ke značkám kvality, a proto je nutné zaměřit se na zlepšení těchto postojů a tomuto segmentu prezentovat benefity, které značky kvality spotřebitelům přináší. Spotřebitelé ze segmentu nepřemýšlejících o kvalitě nejčastěji nesouhlasili s tvrzením, že potraviny označené značkami kvality mají skutečně vyšší kvalitu, a že jsou ochotni si za potraviny označené značkami kvality připlatit.

Spotřebitelé zařazení do segmentu impulzivně nakupujících značkám kvality příliš nevěří, a proto potraviny označené značkami kvality aktivně nevyhledávají. Zde je proto důležité pokusit se o změnu postojů těchto spotřebitelů a zvýšit jejich důvěru ke značkám kvality potravin a zdůraznit benefity značek kvality. Pak je možné pokračovat ve zvyšování známosti jednotlivých značek kvality.

U značek kvality potravin PDO, PGI a TSG je dle výzkumu autora i dřívějších výzkumů (např. Klánová, 2013; Klánová, 2016) nízká znalost deklarovaná spotřebiteli. V rámci Evropské unie je nejvyšší zjištěná znalost u spotřebitelů v Itálii, Francii a Španělsku, kde je také registrováno nejvíce potravin pod těmito značkami. Důvodem vysoké znalosti je zejména dlouholetá tradice značek PDO, PGI a TSG v těchto zemích, a obecně kladný přístup tamějších spotřebitelů ke značení potravin. Vysoký počet potravin označených těmito značkami kvality je také způsoben nadstandardní úrovní poradenství a pomoci žadatelům při vyplňování přihlášky o označení vybrané potraviny značkou kvality (Albuquerque et al., 2018). V těchto zemích také velmi dobře fungují tzv. kolektivní značky kvality a výrobci jsou obecně dobře připraveni na zakládání konsorcia a registraci svých výrobků (Becker et al., 2008). Existuje také reálný dopad na národní ekonomiky jednotlivých zemí Evropské unie, protože menší výrobci zemědělských a potravinářských výrobků mohou těžit z dobře zavedené pověsti značek kvality potravin známých v celé Evropské unii a mohou vyrábět výrobky s přidanou hodnotou, a tak se odlišit se od svých konkurentů (Grunert, 2016). To má dále pozitivní dopad na regionální rozvoj formou nových pracovních míst a zvýšení konkurenceschopnosti regionu.

Komunikace značek hraje zásadní úlohu a je nutné, aby byla diferencovaně zaměřená na segment spotřebitelů, kteří vykazují různá vnímání značek kvality a nákupní chování. Cílem

efektivní komunikace značek je snížení nejistoty spotřebitele při nákupním chování a podpořit racionální výběr produktu (Verbeke et al., 2007; Verbeke a Vermeir a kol., 2007). Čeští spotřebitelé by uvítali označení značek kvality přímo v regálu u výrobku. Jelikož tyto výrobky v dnešní době nejsou nějak výrazně označeny, je třeba toto označení zavést, nejlépe formou umístění loga dané značky kvality vedle cenovky, případně přímo na cenovku, která je umístěna na regálu a vztahuje se k danému produktu. O tuto propagaci přímo v prodejně by se měli postarat výrobci daných potravinářských produktů, kteří v případě zájmu poskytnou prodejci POS materiály (Point of Sale; komunikační nástroje v místě prodeje, např. wobblery a stoppery). Samotní prodejci by tyto produkty měli zároveň podpořit uvedením a zvýrazněním značek kvality ve svých letáčích a časopisech. Aby byla propagace v prodejně co nejintenzivnější, bylo by také vhodné umístit do prodejny na určitou dobu několik infostánků, které by měli na starosti správci značek. Zásadním doporučením je tedy koordinace všech aktivit výrobců a prodejců a správců značek – zařazení do letáku, poskytnutí POS materiálů, vytvoření soutěže (prodejcem či správcem značek) a umístění infostánků.

Novou cestu v propagaci značek kvality otevírá možnost zavedení značení v restauracích a jiných stravovacích zařízeních. V tomto případě by se měli zapojit převážně správci jednotlivých značek a vybavit jednotlivé restaurace a jídelny propagačními materiály. Samozřejmě je nutná spolupráce ze strany majitelů těchto stravovacích zařízení. Ideální označení je pro spotřebitele upozornění přímo v jídelním lístku. V části, kde je pokrm blíže popsán, by mohla být uvedena všechna loga, která se objevují na potravinách, které se používají k přípravě daného pokrmu a spotřebitel tedy uvidí, zda se jedná o pokrm, jehož součástí jsou např. ryze české suroviny, suroviny evropské nebo v BIO kvalitě. Vzhledem ke skutečnosti, že jídelní lístek si prohlíží většina, ne-li všichni z návštěvníků, je velká pravděpodobnost zvýšení povědomí o používaných značkách kvality.

### **Doporučení ke zvýšení důvěry ve značky a jejich hodnoty pro spotřebitele**

Bylo zjišťováno, zda respondenti důvěřují výrobkům se značkami kvality více než výrobkům bez značek, kdy téměř 65 % z českých respondentů důvěřuje těmto výrobkům více než výrobkům bez značek. Tato informace potvrzuje, že značky kvality mohou přinést konkurenční výhodu. Pokud jsou dané výrobky opatřeny značkami vnímány jako důvěryhodnější, spotřebitel jím může dát přednost před výrobky bez značek kvality. Ne všechny značky jsou vnímány jako důvěryhodné, proto bylo zjišťováno, která ze značek kvality se pro spotřebitele jeví jako nejdůvěryhodnější. Na základě četností (kolikrát byla daná značka označena respondenty jako důvěryhodná) je pro české spotřebitele nejdůvěryhodnější značkou značka Klasa. Potvrzuje se

také, že tato značka má dominantní postavení mezi ostatními značkami kvality potravin. Mnoho českých spotřebitelů nemá dostatek informací o daných značkách, nemají s nimi zkušenosti, popř. nedostali příležitost si tyto výrobky vyzkoušet.

Dalším doporučením by bylo provedení výzkumu zaměřeného na spotřebitelem vnímanou hodnotu značek kvality. Tato otázka ovšem nebyla detailněji rozebírána, proto je vhodné zjistit konkrétnější výsledky, např. za jaké výrobky jsou spotřebitelé ochotni si připlatit a kolik.

Vnímanou důvěryhodnost značek kvality ovlivňuje i fakt, zda za certifikaci výrobci platí či neplatí poplatek. Dle výzkumu Velčovské (2018) je pro spotřebitele, kteří potraviny označené značkami kvality vyhledávají, více důvěryhodná značka, jejíž získání je s poplatkem spojeno. Je-li získání značky kvality bezplatné, může to vést k situaci, že o ni výrobci budou ve zvýšené míře žádat, ale zároveň může být považována za důvěryhodnější, protože správce značky není zainteresován na platbách od výrobců a udělování značek je tak objektivnější (Velčovská, 2018). Dále z průzkumu společnosti Sanep vyplynulo, že spotřebitelé značkám kvality potravin důvěřují tehdy, když jsou potraviny posuzovány nezávislými laboratořemi a pokud spotřebitelé znají jasně daná kritéria pro udělování značek kvality (Klánová, 2013).

### **Doporučení týkající se působení na nákupní chování spotřebitelů**

Skutečnost, že spotřebitelé vybraným značkám kvality důvěřují, se jistě pojí i s faktem, že nadpoloviční většina respondentů vnímá výrobky se značkami kvality jako kvalitnější. Z analýzy vyplynulo, že kvalita je nejčastějším důvodem nákupu takto označených potravin. Jasným doporučením je tedy zaměřit se na poskytování informací o konkrétních značkách kvality, k čemu slouží a co garantují. Při velkém množství značek kvality je spotřebitel zahlcen mnohdy nadbytečnými a nedůležitými informacemi, proto je doporučeno soustředit se na základní informace tak, aby byly pro spotřebitele snadno zapamatovatelné. Z výzkumu je patrné, že čeští spotřebitelé pozitivně reagují na původ výrobku a snaží se podporovat české výrobce. Toto je vhodné využít převážně u značek Klasa a Český výrobek – Garantováno potravinářskou komorou ČR, které garantují český původ či české suroviny, což souvisí se spotřebitelským etnocentrismem. Tyto značky by se měly ve své komunikaci zaměřit na zdůraznění podpory českých výrobců. Hlavním důvodem nákupu se stala vnímaná kvalita výrobků označených značkami kvality. Aby se nejednalo pouze o kvalitu vnímanou, ale skutečnou, měli by správci, popř. kontrolní orgány dělat pravidelné kontroly kvality označovaných výrobků, o kterých by následně spotřebitele informovali prostřednictvím svých internetových stránek, kde by byly výsledky těchto kontrol zveřejněny, a zavést přísnější normy týkající se kvality, např. vyloučení chemických přísad z takto značených výrobků. V médiích



se čas od času objevují články zpochybňující tyto značky a převážně kvalitu takto značených výrobků, a tak zavedení přísnějších norem by mohlo přispět k vyřešení daného problému. Tato záležitost se týká ve většině případů jen českých výrobků, které značky kvality získaly.

Inspiraci je možné také získat od slovenských sousedů, jejichž nejznámější značka kvality ZK SK má dva stupně: ZK SK pro výrobky s ověřenou kvalitou a ZK SK Gold pro výrobky, které mají v porovnání s ostatními výrobky na slovenském trhu nadstandardní kvalitativní charakteristiky (Ministerstvo pôdohospodárstva SR, 2017). Podobně by bylo možné zavést dva stupně pro značku kvality Klasa a využít tak jejího dominantního postavení na českém trhu. Šlo by o značku Klasa pro standardní výrobky a značku Klasa Gold pro výrobky s výjimečnými kvalitativními charakteristikami.

## 6. Shrnutí přínosů disertační práce

Obsahem 6. kapitoly je zhodnocení výstupů prezentovaných v kapitolách 4.2 až 4.4. Nejprve jsou zhodnoceny specifické výzkumné otázky, které byly definovány v kapitole 4.2, a pak jsou porovnány segmenty vytvořené na základě primárních dat z terénního šetření a z databáze MML-TGI. Dále jsou v kapitolách 6.1 až 6.4 uvedeny konkrétní přínosy práce pro vědu, praxi a pedagogiku.

### 6.1. Naplnění cílů práce

**SVO1: Jaké je využití evropského systému značení potravin v jednotlivých státech Evropské unie?** Systém evropského značení kvality potravin je využíván skoro ve všech členských státech Evropské unie, ale existují velké rozdíly způsobené zejména tradicí a délkou užívání značek kvality, zaměřením ekonomiky dané země na produkci potravin a také samotnou velikostí země. To je také důvodem, proč je nejvíce značek kvality Chráněné označení původu, Chráněné zeměpisné označení a Tradiční zaručená specialita registrováno ve státech jako je Francie, Itálie a Španělsko, kde má toto značení dlouholetou tradici, země jsou významnými producenty potravin, a navíc jsou i dost velké a zahrnují odlišné oblasti, které produkci tradičních a typických potravin ještě zvýrazňují.

**SVO2: Jaké jsou přínosy regionálního značení potravin pro producenty?** Na tuto otázku odpovídá příspěvek Benefits of Regional Food Quality Labels for Czech Producers v kapitole 8. Výrobci potravin v průměru pocítli zvýšení odbytu svých produktů po získání značky Regionální potravina, ale není možné zcela vyloučit i další faktory, které mohly zvýšení poptávky způsobit, např. zlepšení ekonomické situace, vliv sezónnosti či komunikační kampaň výrobce. Výrobci vidí největší problém ve vnímání značky kvality Regionální potravina v očích spotřebitelů a v nedostatečné podpoře této značky ze strany státu.

**SVO3: Které značky potravin spotřebitelé znají?** Bylo potvrzeno, že značka kvality Klasa má své dominantní postavení v rámci spontánní znalosti značek kvality potravin českými spotřebiteli. Největší znalost značek kvality potravin deklarovali spotřebitelé ze segmentu vyhledávajících kvalitu. Spotřebitelé znají často značky kvality jako je Bio, Český výrobek, Český produkt a také různé regionální značky kvality. Znalost evropského systému značení

kvality potravin (značky Chráněné označení původu, Chráněné zeměpisné označení a Tradiční zaručená specialita) deklarovalo méně než 5 % dotázaných.

**SVO4: Je značka kvality faktorem, který spotřebitelé využívají při nákupu potravin pro rozpoznání kvalitního výrobku?** Ano, ale pouze pro méně než 10 % spotřebitelů. Výrazně vyšší zastoupení spotřebitelů, pro které je značka kvality jedním z kritérií výběru, bylo v segmentu vyhledávajících kvalitu. Naopak pro většinu spotřebitelů z celého výběrového souboru byla na prvních místech cena, původ potravin, vzhled a čerstvost. Roli hraje také dřívější zákaznická zkušenost s potravinou.

**SVO5: Jak splňují potraviny označené značkami kvality očekávání zákazníků?** Potraviny označené značkami kvality splňují očekávání zákazníků nadprůměrně, avšak rozdíly se liší v závislosti na segmentu spotřebitelů. Nejvíce jsou splněna očekávání u segmentu vyhledávajících kvalitu (očekávání jsou splněna v průměru na 77 %), nejméně u segmentu nepřemýšlejících o kvalitě (očekávání jsou splněna průměrně na 58 %).

**SVO6: Považují spotřebitelé potraviny označené značkami kvality za skutečně kvalitnější?** Ano, ale pouze asi 20 % spotřebitelů. Častěji než se značkou kvality je pojem kvalitní potravina asociován s pojmy, jako je složení, čerstvost, vzhled či původ. Nejčastěji považovali potraviny označené značkami kvality za skutečně kvalitnější zástupci segmentu vyhledávajících kvalitu.

**SVO7: Jsou značky kvality potravin důvěryhodné?** Ano, většina spotřebitelů považuje značky kvality potravin za důvěryhodné, avšak opět existují rozdíly mezi jednotlivými segmenty, kde největší důvěru ve značky kvality potravin mají spotřebitelé ze segmentu vyhledávajících kvalitu (průměrná důvěryhodnost činí 76 %), nejméně u segmentu nepřemýšlejících o kvalitě (průměrná důvěryhodnost je 56 %).

**SVO8: Jsou zákazníci ochotni platit více za potraviny označené značkami kvality než za potraviny neoznačené?** Tuto výzkumnou otázku je možné považovat za jedno z významných segmentačních kritérií, protože u ochoty platit více za potraviny označené značkami kvality jsou rozdíly v průměrných hodnotách odpovědí nejvyšší. Spotřebitelé patřící do segmentu vyhledávajících kvalitu jsou ochotni si připlatit v 82 % případů, zatímco spotřebitelé nepřemýšlející o kvalitě pouze v 48,6 % případů.

## **6.2. Přínosy disertační práce pro vědu**

Teoretický přínos je možné definovat už v samotném zpracování disertační práce. Konkrétně ve vymezení a posouzení hlavních vědeckých přístupů řady autorů k problematice značek kvality potravin, chování spotřebitele na trhu potravin označených značkami kvality a také teoretická východiska značení potravin. Přínosem práce je systematizace poznatků o značkách kvality potravin na českém trhu a charakteristika vybraných značek. Dalším přínosem je návrh segmentace zákazníků nakupujících potraviny označené značkami kvality v České republice a porovnání se segmentací vytvořenou s využitím databáze MML-TGI. Při zpracování disertační práce byla využita nejnovější dostupná vědecká a odborná literatura, vědecké monografie, statě a články v recenzovaných vědeckých časopisech, příspěvky z vědeckých konferencí, odborné studie a vědecké zprávy. Výzkum je součástí výzkumného projektu IGA F3, 34/2018, Chování spotřebitele na trhu potravin označených značkami kvality v České republice, kterým byl finančně podpořen. Výsledky provedeného výzkumu jsou prezentovány pěti příspěvky v časopisech evidovaných v databázích Scopus a Web of Science.

## **6.3. Přínosy disertační práce pro praxi**

Návrhy vycházející z provedeného výzkumu jsou určeny nejen správcům značek, ale také výrobcům potravin. Nejprve jsou prezentována teoretická doporučení týkající se počtu a zaměření značek kvality na českém potravinářském trhu s ohledem na zvýšení vnímané důvěryhodnosti těchto značek mezi spotřebiteli. Je proto navrženo zjednodušení systému značek kvality, v rámci kterého by existovaly značky kvality na třech úrovních (mezinárodní, národní a regionální), které by byly jasně vymezené a jednoznačně odlišitelné. Značky kvality potravin musí být pro spotřebitele srozumitelné, transparentní s jasně danými přísnými kritérii pro udělování a důvěryhodné. Značky kvality potravin by měly garantovat ty charakteristiky a vlastnosti, které jsou pro spotřebitele při výběru potravin klíčové. Druhá skupina doporučení je zaměřena na zvýšení známosti značek kvality mezi spotřebiteli a zlepšení postojů k těmto značkám.

#### **6.4. Přínosy disertační práce pro pedagogiku**

Výsledky výzkumu autor prezentoval studentům v rámci předmětů Retail marketing (2OP302), Retail Marketing – anglicky (2OP352) a Seminář k Retail Businessu (2OP525), kde byly součástí přednášek i cvičení. Závěry výzkumu je možné prezentovat i v dalších předmětech zaměřených na produktový management a strategii značek. Atraktivní je rovněž zpracování podobného tématu formou bakalářské nebo diplomové práce, kdy se studenti mohou zaměřit na určitou skupinu značek nebo na vybraný segment či subkulturu zákazníků, jejich nákupní chování analyzovat a navrhnout příslušná opatření pro zlepšení stávající situace.

## 7. Diskuze

Kapitola 7. Diskuze shrnuje výsledky provedených výzkumu a porovnává je s dřívějšími publikacemi dalších autorů. Závěrem výzkumu je, že typický spotřebitel, pro kterého jsou značky kvality potravin důležitým kritériem výběru, žije v domácnosti s rodinou, má středoškolské a vyšší vzdělání, nadprůměrné příjmy a je to častěji žena než muž. To také podporuje závěry předchozích výzkumů (Besler et al., 2012; Blitstein a Evans, 2006; Souza a kol., 2011; Velčovská, 2018).

Při zjišťování tří faktorů, které nejvíce ovlivňují spotřebitele při nakupování potravin, byl potvrzen předpoklad, že faktorem na prvním místě je cena. Přesnější výsledky je možné potvrdit s vyšším počtem respondentů a statisticky významnou korelací. Podle názoru spotřebitelů je druhým nejdůležitějším faktorem po ceně původ potraviny, kde respondenty zajímá, ze které země pochází produkt a v případě, že jde o domácí produkt, z jakého regionu. Vnímání regionálního označení kvality spotřebiteli se skládá ze dvou dimenzí: 1) záruky jakosti a 2) ekonomické podpory daného regionu, které ovlivňují záměr koupě, a ochota platit za chráněný produkt původu (Van Ittersum et al., 2007).

Třetím nejdůležitějším faktorem je senzorické hodnocení produktu. Vizuální vlastnosti proto hrají důležitou roli při výběru potravin. Je také třeba zmínit faktory, které se vyskytovaly na dalších místech, to jsou: kvalita, složení produktu, chuť nebo doporučení. Na základě všech výše uvedených informací lze konstatovat, že značky kvality nejsou jedním z klíčových faktorů při výběru potravin, a proto nemají významný vliv na chování spotřebitelů. Např. v průzkumu polských zpracovatelů potravin představovaly nejdůležitější determinanty konkurenční výhody na polském trhu chuť, cena a zajištění dostatečné kvality, zatímco na zahraničních trzích bylo nejvyšší hodnocení kvality, následované chutí a cenou (Bryła, 2012).

Vliv ceny na rozhodování spotřebitelů je u mnoha zákazníků v České republice nejdůležitějším kritériem při nákupu potravin. To potvrzuje Fotopoulos a Krystallis, že síla a postavení dané značky kvality potravin na trhu jsou vyjádřeny ochotou spotřebitele platit vyšší cenu (Fotopoulos a Krystallis, 2003).

Závěrečná část výzkumu zkoumala názory spotřebitelů na potravinářské výrobky označené značkami kvality. Téměř 95 % respondentů spíše souhlasí s tím, že označené potraviny splňují jejich očekávání, zatímco pouze 58 % spotřebitelů považuje označené výrobky za vyšší kvalitu ve srovnání s konvenčními výrobky. Důvěra značky je pozitivně spojena se spotřebitelskou

důvěrou v kvalitu a bezpečnost značky, především důvěrou v potravinový systém (Bryła, 2017). Důvěra v atributy věrnosti pak vede k loajalitě značky (Lassoued a Hobbs, 2015). Co se týče otázky, zda jsou označení kvality důvěryhodná, kladně odpovědělo 61 % dotázaných, zatímco 19 % souhlasilo a 42 % spíše souhlasilo s tímto tvrzením.

Zároveň je 72 % respondentů ochotno zaplatit více za označené potravinářské výrobky než za ty neoznačené, jednoduše proto že potraviny označené značkou kvality vnímají jako produkty s vyšší kvalitou nebo nějakou výjimečnou hodnotou, či v případě značky kvality Bio mohou očekávat zdravější produkty. Na závěr přibližně dvě třetiny spotřebitelů důvěřují značkám kvality a téměř tři čtvrtiny jsou ochotni zaplatit za tyto označené výrobky více. To je v souladu s předchozími studiemi ze zemí západní Evropy, které prokázaly, že značka kvality je vnímána jako hlavní zdroj informací o kvalitě produktu (Grunert, 2005; Joubert a Poalses, 2012), avšak ve skutečnosti znalost značek kvality není s ohledem na jejich význam vysoká. To potvrzují také studie Aprile a kol. (2012), Festila a kol. (2014), Loureiro a McCluskey (2003), Rousseau a Vranken (2013), že značky kvality jsou účinným nástrojem pro zvýšení informovanosti spotřebitelů o kvalitě potravin.

## 8. Závěr

Na základě obou analýz (primární data i databáze MML-TGI) vyplynulo, že na českém trhu potravin je možné pracovat se třemi segmenty spotřebitelů, přičemž odlišnosti mezi segmenty vyplývají zejména z rozdílů v postojích ke značkám kvality potravin. I v praxi je vhodné pracovat se segmentací, kdy existuje největší skupina spotřebitelů, kteří mají ke značkám kvality potravin neutrální až lhostejný vztah, a pak segmentem, který značky kvality aktivně a cíleně vyhledává, a segmentem, který jim nedůvěřuje. Při srovnání sociodemografických charakteristik obou typologií můžeme říci, že se v kategoriích věku, čistého příjmu domácnosti / respondenta a vzdělání poměrně shodují. Jistě by bylo zajímavé dále pečlivěji analyzovat zastoupení jednotlivých segmentů v regionech České republiky, resp. zda je možné definovat významné rozdíly mezi metropolitními oblastmi a venkovskými regiony.

Omezení provedeného výzkumu spočívají ve výběru jen omezeného počtu značek kvality, se kterými se spotřebitelé mohou setkat na českém trhu potravin. S ohledem na počet existujících značek nebylo možné zařadit všechny aktuálně existující značky kvality. Z velkého počtu značek na českém trhu také vyplývá jeden z předpokladů výzkumu, že se spotřebitel v tak velkém množství obtížně orientuje. Vzhledem k rozsahu dané problematiky rovněž nebylo možné zabývat se podrobněji všemi faktory, které s kvalitou a značkami potravin souvisejí.

Budoucí výzkumy bude vhodné zaměřit na vývoj postojů spotřebitelů ke značkám kvality potravin a dále realizovat rozsáhlejší studii zaměřenou na srovnání spotřebitelských postojů ke značkám kvality potravin ve více zemích EU. Další možností je zkoumat vnímání postojů jednotlivými generacemi spotřebitelů (Generace X, Generace Y a Generace Z). Pro zpřesnění typologie spotřebitelů by bylo užitečné rozšířit výzkum o některé další sociodemografické charakteristiky či vybrané charakteristiky nákupního chování.

V rámci podrobného zkoumání by bylo zajímavé zaměřit se na konkrétní kategorie potravin, zjišťovat vliv značek kvality přímo v těchto kategoriích a následně srovnat, ve kterých kategoriích jsou značky kvality potravin důležitým vodítkem při nákupu potravin.

Specifickou oblastí výzkumu by mohla být loga značek kvality potravin a asociace, která tato loga vyvolávají. Další zkoumání by mohlo být zaměřeno také na marketingovou komunikaci značek kvality s cílem zjistit, která média jednotlivé spotřebitelské segmenty sledují a jaká forma komunikace značek kvality by pro ně byla relevantní.



V průběhu rešerší, sběru, a hlavně analýzy dat byla získána řada námětů na další výzkum, které mohou být velmi zajímavé, ale bohužel již přesahují rámec této práce. Je nutno zdůraznit skutečnost, že výzkumné šetření proběhlo pouze na území České republiky a mapuje tak názory a postoje českých spotřebitelů. Dotazování proběhlo na výběrovém souboru, který je možné považovat za reprezentativní z pohledu pohlaví a věku respondentů. Další sociodemografické charakteristiky (vzdělání, socioekonomický status, velikost domácnosti, velikost bydliště) byly také sledovány, ale nebylo vždy dosaženo plné reprezentativnosti. Dalším omezením výzkumu bylo dotazování na pouze omezený počet značek kvality, a nikoliv na všechny značky kvality potravin, které se na českém trhu vyskytují. Protože však byl zároveň proveden návrh segmentace spotřebitelů na základě databáze MML-TGI, je možné návrh segmentace využívající data z terénního šetření porovnat s návrhem segmentace z této velké databáze, která reprezentativnost výběrového souboru splňuje u většiny sociodemografických charakteristik.

Zjištění, která výzkum přinesl, mohou být inspirací a východiskem pro další výzkum znalosti značek kvality potravin a postoje spotřebitelů ke značkám kvality na českém trhu. Bylo by jistě zajímavé a přínosné, provést stejný výzkum s určitým časovým odstupem, např. za pět let. Pak by bylo možné zhodnotit vývoj znalosti a postojů respondentů ke značkám kvality potravin a posoudit vliv komunikačních kampaní na jejich podporu.

Další možností je provést stejné dotazování i v jiných členských zemích EU a porovnat regionální rozdíly, či zahrnout mezi sledované proměnné výběrového souboru i behaviorální a psychografické proměnné, které vyplynuly z dřívějších výzkumů.

Závěrem je nutné uvést jedno z omezení výzkumu: různé výzkumy zkoumající znalost a postoje respondentů ke značkám kvality potravin používají různé typy otázek a hodnotících škál. Kromě toho některé výzkumy sledovaly zejména tzv. vnitřní atributy (senzorické charakteristiky, čerstvost či složení) a jiné zejména tzv. vnější podněty (značka, obal, země původu). Jde proto o další faktory, které ovlivňují nákupní rozhodování spotřebitele a jistě by bylo vhodné zaměřit tímto směrem budoucí výzkum.

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## **Seznam příloh**

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## 9. Příloha 1 – Dotazník

Vážení zákazníci,

chtěl bych Vás požádat o spolupráci při výzkumu nákupního chování spotřebitelů na trhu potravin označených značkami kvality. Rozhovor je anonymní a data, která poskytnete, budou použita výhradně pro účely tohoto výzkumu a zpracování disertační práce. Děkuji za Váš čas a poskytnuté informace.

Tomáš Sadílek

1. **Číslo dotazníku**
2. **Znáte některou ze značek kvality potravin?**  
ANO NE
3. **Uveďte tři faktory, které Vás nejvíce ovlivňují při nákupu potravin.**
4. **Vyjmenujte značky kvality potravin, které znáte.**
5. **Splňují potraviny označené značkami kvality Vaše očekávání?**  
1 – zcela souhlasím  
2 – spíše souhlasím  
3 – ani souhlasím, ani nesouhlasím  
4 – spíše nesouhlasím  
5 – zcela nesouhlasím
6. **Jaká jsou Vaše očekávání konkrétně? (zvolte nejvýše tři odpovědi)**  
je vyrobena z kvalitních surovin  
složení je bez náhražek  
výživově hodnotná potravina  
zdravotně nezávadná  
splňující chuťové očekávání  
má známý geografický původ  
zaručena značkou kvality  
je to český výrobek  
je to biopotravina  
jiná očekávání

- 7. Jsou dle Vašeho názoru potraviny označené značkami kvality skutečně kvalitnější?**
- 1 – zcela souhlasím
  - 2 – spíše souhlasím
  - 3 – ani souhlasím, ani nesouhlasím
  - 4 – spíše nesouhlasím
  - 5 – zcela nesouhlasím
- 8. Jsou podle Vašeho názoru značky kvality důvěryhodné?**
- 1 – zcela souhlasím
  - 2 – spíše souhlasím
  - 3 – ani souhlasím, ani nesouhlasím
  - 4 – spíše nesouhlasím
  - 5 – zcela nesouhlasím
- 9. Jste ochotni platit za potraviny označené značkami kvality více, než za potraviny neoznačené?**
- 1 – zcela souhlasím
  - 2 – spíše souhlasím
  - 3 – ani souhlasím, ani nesouhlasím
  - 4 – spíše nesouhlasím
  - 5 – zcela nesouhlasím
- 10. Kolik členů má domácnost, ve které žijete?**
- a. 1
  - b. 2
  - c. 3
  - d. 4
  - e. 5 a více
- 11. Uved'te, v jakém intervalu je celkový měsíční čistý příjem Vaší domácnosti?**
- a. Do 10 000 Kč
  - b. 10 001 – 20 000 Kč
  - c. 20 001 – 30 000 Kč
  - d. 30 001 – 40 000 Kč
  - e. 40 001 – 60 000 Kč
  - f. Nad 60 000 Kč

**12. Uved'te, jaké je Vaše nejvyšší dosažené vzdělání?**

- a. Základní
- b. Středoškolské bez maturity
- c. Středoškolské s maturitou
- d. Vyšší odborné
- e. Vysokoškolské

**13. Uved'te Vaše PSČ.**

## 10. Příloha 2 – Základní výstupy statistických analýz

**Tabulka 2.1 Znalost značek kvality respondenty (v %)**

	Ano	Ne	T-test	sig
<b>Znáte některou ze značek kvality potravin?</b>	85,55	15,55	22,16	0,000

Zdroj: vlastní zpracování

**Tabulka 2.2 Pořadí značek kvality potravin dle spontánní znalosti**

	První značka	Druhá značka	Třetí značka
<b>1</b>	Klasa	Jiná	Regionální potravina
<b>2</b>	Český produkt	Český výrobek	Jiná
<b>3</b>	Other	Chráněné zeměpisné označení	Chráněné označení původu
<b>4</b>	Jiná	Regionální potravina	Český produkt
<b>5</b>		Český produkt	
<b>6</b>		Zdravá potravina	

Zdroj: vlastní zpracování

pozn: hodnoty Kendalova tau jsou na intervalu od -0,501 do 0,229 a statisticky významné na hladině významnosti  $\alpha = 0,05$ .

**Tabulka 2.3 Pořadí faktorů, které nejvíce ovlivňují spotřebitele při nákupu potravin**

	První faktor	Druhý faktor	Třetí faktor
<b>1</b>	Cena	Cena	Cena
<b>2</b>	Původ	Původ	Vzhled
<b>3</b>	Kvalita	Složení	Značka kvality
<b>4</b>	Složení	Appearance	Složení
<b>5</b>	Chut'	Vzhled	Doporučení
<b>6</b>	Vzhled	Doporučení	Kvalita
<b>7</b>	Značka kvality	Obal	Čerstvost
<b>8</b>	Obal	Čerstvost	Chut'
<b>9</b>	Čerstvost	Chut'	Umístění v regálu
<b>10</b>	Jiné	Značka kvality	Vystavení v regálu

Zdroj: vlastní zpracování

pozn: hodnoty Kendalova tau jsou na intervalu od -0,433 do 0,06 a statisticky významné na hladině významnosti  $\alpha = 0,05$ .

**Tabulka 2.4 Rozložení odpovědí pro tvrzení T1 – T4 (v %)**

	1	2	3	4	5	T-test	sig
<b>T1: Splňují potraviny označené značkami kvality Vaše očekávání?</b>	0	94,4	5,6	0	0	53,09	0,000
<b>T2: Jsou dle Vašeho názoru potraviny označené značkami kvality skutečně kvalitnější?</b>	1,9	44,4	30,6	2,8	2,8	15,43	0,000
<b>T3: Jsou podle Vašeho názoru značky kvality důvěryhodné?</b>	19,4	41,7	22,2	8,3	2,8	13,36	0,000
<b>T4: Jste ochotni platit za potraviny označené značkami kvality více, než za potraviny neoznačené?</b>	27,8	44,4	13,9	5,6	2,8	12,21	0,000

Zdroj: vlastní zpracování

pozn: 1 – zcela souhlasím, 2 – spíše souhlasím, 3 – ani souhlasím, ani nesouhlasím, 4 – spíše nesouhlasím, 5 – zcela nesouhlasím

**Tabulka 2.5 Matice korelačních koeficientů pro tvrzení ze shlukové analýzy (Spearmanův korelační koeficient)**

<b>Tvrzení</b>	<b>T1</b>	<b>T2</b>	<b>T3</b>	<b>T4</b>
<b>T1: Potraviny označené značkami kvality splňují moje očekávání.</b>	1			
<b>T2: Potraviny označené značkami kvality jsou skutečně kvalitnější.</b>	0,549	1		
<b>T3: Značky kvality jsou důvěryhodné.</b>	0,515	0,717	1	
<b>T4: Jsem ochotná/ý platit za potraviny označené značkami kvality více než za potraviny neoznačené.</b>	0,448	0,549	0,536	1

Zdroj: vlastní zpracování

**Tabulka 2.6 Koeficienty Eta pro tvrzení ze shlukové analýzy**

<b>Measure of Association</b>	<b>Eta</b>
<b>T1*Ward Method</b>	0,645
<b>T2*Ward Method</b>	0,612
<b>T3*Ward Method</b>	0,451
<b>T4*Ward Method</b>	0,433

Zdroj: vlastní zpracování

**Tabulka 2.7 Testování normality dat pro vytvořené shluky**

Test of normality							
Tvrzení	Ward Method	Kolmogorov-Smirnov			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	Df	Sig.
<b>T1</b>	Vyhledávající kvalitu	0,219	113	0,000	0,924	113	0,000
	Nepřemýšlející o kvalitě	0,179	215	0,000	0,865	215	0,000
	Impulzivně nakupující	0,246	116	0,000	0,842	116	0,000
<b>T2</b>	Vyhledávající kvalitu	0,271	113	0,000	0,963	113	0,000
	Nepřemýšlející o kvalitě	0,213	215	0,000	0,914	215	0,000
	Impulzivně nakupující	0,256	116	0,000	0,973	116	0,000
<b>T3</b>	Vyhledávající kvalitu	0,288	113	0,000	0,862	113	0,000
	Nepřemýšlející o kvalitě	0,159	215	0,000	0,905	215	0,000
	Impulzivně nakupující	0,148	116	0,000	0,904	116	0,000
<b>T4</b>	Vyhledávající kvalitu	0,250	113	0,000	0,910	113	0,000
	Nepřemýšlející o kvalitě	0,264	215	0,000	0,984	215	0,000
	Impulzivně nakupující	0,192	116	0,000	0,801	116	0,000

Zdroj: vlastní zpracování

**Tabulka 2.8 Kruskal-Wallis test pro vytvořené shluky**

Tvrzení	Ward Method	N	Mean Rank
<b>T1</b>	Vyhledávající kvalitu	113	412,35
	Nepřemýšlející o kvalitě	215	367,12
	Impulzivně nakupující	116	210,19
<b>T2</b>	Vyhledávající kvalitu	113	485,21
	Nepřemýšlející o kvalitě	215	389,50
	Impulzivně nakupující	116	222,16
<b>T3</b>	Vyhledávající kvalitu	113	401,89
	Nepřemýšlející o kvalitě	215	391,18
	Impulzivně nakupující	116	209,32
<b>T4</b>	Vyhledávající kvalitu	113	411,41
	Nepřemýšlející o kvalitě	215	301,56
	Impulzivně nakupující	116	199,47

Zdroj: vlastní zpracování

**Tabulka 2.9 Zastoupení vytvořených shluků v sociodemografických segmentech spotřebitelů (v %)**

		<b>Vyhledávající kvalitu</b>	<b>Nepřemýšlející o kvalitě</b>	<b>Impulzivně nakupující</b>
<b>Počet členů domácnosti</b>	1	5,6	13,5	10,3
	2	34,7	27,0	41,0
	3	20,8	16,2	17,9
	4	29,2	32,4	28,2
	5	9,7	8,1	2,6
<b>Vzdělání</b>	Základní	8,3	0,0	0,0
	SŠ bez maturity	0,0	56,8	7,7
	SŠ s maturitou	34,7	43,2	41,0
	VOŠ	4,2	0,0	0,0
	Vysokoškolské	54,2	0,0	51,3
<b>Pohlaví</b>	Žena	68,1	78,4	82,1
	Muž	31,9	21,6	17,9
<b>Celkový měsíční čistý příjem domácnosti (Kč)</b>	Do 10 000	4,2	5,4	5,1
	10 001–20 000	18,1	16,2	12,8
	20 001–30 000	25,0	21,6	23,1
	30 001–40 000	26,4	32,4	35,9
	40 001–60 000	13,9	13,5	17,9
	Nad 60 000	13,9	13,5	7,7
<b>Věk</b>	20–29 let	48,6	48,6	53,8
	30–39 let	12,5	13,5	12,8
	40–49 let	26,4	21,6	17,9
	50–59 let	11,1	13,5	17,9
	60 let	1,4	0,0	0,0
<b>Region</b>	Praha a Středočeský kraj	55,6	2,7	79,5
	Plzeňský kraj	23,6	37,8	12,8
	Olomoucký kraj	20,8	35,1	7,7

Zdroj: vlastní zpracování

**Tabulka 2.10 Rozložení průměrných hodnot odpovědí na výroky vstupující do faktorové analýzy (n = 15 020, v %)**

FA 30.10.2018 14:38:19							
MML-TGI ČR 2016 1. - 4. kvartál SPOJENÁ (11.01.2016 - 18.12.2016)							
CS: CS Všichni Projekce na jednotlivce, Váženo	určitě ano	spíše ano	ani ano, ani ne	spíše ne	urč. ne	neuve- deno	cel- kem
001 Dávám přednost značkovému zboží.	7,2	23,8	28,9	20,3	18,6	1,2	100
008 Při nákupu se řídím pouze druhem zboží, nezáleží mi na značce.	11,5	32,1	34,8	14,8	5	1,8	100
011 Značkové zboží je zárukou kvality.	8,4	26,2	37,3	17,4	8,9	1,8	100
015 Za kvalitní zboží jsem ochoten zaplatit více.	12,7	42,2	28,8	10,5	4,1	1,8	100
021 Pokud najdu značku, která mi vyhovuje, neměním ji.	15,9	40,5	27	10,2	4,5	2	100
022 Kupuji pouze velmi kvalitní výrobky.	5,2	27,3	43,2	16,7	6,1	1,7	100
028 Vyšší cena garantuje vyšší kvalitu zboží.	5,2	20,7	35,3	22,3	14,4	2,2	100
029 Rád(a) zkouším nové značky výrobků.	5,5	22,6	38,8	23,8	7,7	1,7	100
030 Čtu si údaje na obalech výrobků.	13,7	30,6	27,3	17,8	8,9	1,8	100
038 Kvalitní zboží je vždy dražší.	13,3	33,9	33,1	12,6	5,3	1,7	100
878 Když vidím novou značku, často ji koupím, abych viděl(a) jaká je.	2,7	12,5	25,7	28,7	25,5	4,9	100
879 Když objevím značku, která mi vyhovuje (která se mi líbí), mám tendenci u ní setrvat.	15,2	40,7	24,4	8,6	6,2	4,9	100
880 Myslím že dobře známé značky jsou lepší.	8,3	26,8	38,9	13,4	7,5	5,1	100
979 Vyplatí se připlatit si za kvalitní produkt.	13,3	39,5	28,6	8,8	3,5	6,3	100

Zdroj: MML-TGI ČR 2016 1. - 4. kvartál SPOJENÁ (11.01.2016 - 18.12.2016), CS: CS Všichni



**Tabulka 2.11 Korelační matice výroků vstupujících do faktorové analýzy (n = 15 020)**

F 30.10.2018 14:41:44															
MML-TGI ČR 2016 1. - 4. kvartál SPOJENÁ (11.01.2016 - 18.12.2016)															
CS: CS Všichni, Projekce na jednotlivce, Váženo	001	008	011	015	021	022	028	029	030	038	878	879	880	979	
001 Dávám přednost značkovému zboží.	1														
008 Při nákupu se řídím pouze druhem zboží, nezáleží mi na značce.	-,271	1													
011 Značkové zboží je zárukou kvality.	,361	-,018	1												
015 Za kvalitní zboží jsem ochoten zaplatit více.	,324	-,028	,247	1											
021 Pokud najdu značku, která mi vyhovuje, neměním ji.	,111	132	,046	,222	1										
022 Kupuji pouze velmi kvalitní výrobky.	,319	,021	,296	,38	,287	1									
028 Vyšší cena garantuje vyšší kvalitu zboží.	,315	-,072	,494	,213	,04	,258	1								
029 Rád(a) zkouším nové značky výrobků.	,313	-,031	,271	,323	,016	,284	,39	1							
030 Čtu si údaje na obalech výrobků.	,106	,004	,037	,227	,113	,149	,09	,266	1						
038 Kvalitní zboží je vždy dražší.	,143	,042	,408	,27	,133	,238	,363	,193	,054	1					
878 Když vidím novou značku, často ji koupím, abych viděl(a) jaká je.	,263	-,06	,232	,114	,011	,162	,279	,333	-,008	,159	1				
879 Když objevím značku, která mi vyhovuje (která se mi líbí), mám tendenci u ní setrvat.	,062	,071	,063	,194	,291	,066	,037	,021	,08	,131	,19	1			
880 Myslím že dobře známé značky jsou lepší.	,253	-,01	,334	,248	,138	,186	,31	,175	,053	,32	,327	,424	1		
979 Vyplatí se připlatit si za kvalitní produkt.	,229	,001	,21	,396	,207	,24	,151	,155	,181	,251	,089	,28	,325	1	

Zdroj: MML-TGI ČR 2016 1. - 4. kvartál SPOJENÁ (11.01.2016 - 18.12.2016), CS: CS Všichni

**Tabulka 2.12 Zrotovaná faktorová matice s uvedením faktorových zátěží nižších než 0,4**

MML-TGI ČR 2016 1. - 4. kvartál SPOJENÁ (11.01.2016 - 18.12.2016) CS: CS Všichni Projekce na jednotlivce, Váženo	Kvalitnější je dražší	Loajalita ke značce kvality	Brand Awareness	Vyhledávání informací	Preferuji značky
011 Značkové zboží je zárukou kvality.	0,781	0,113			0,116
028 Vyšší cena garantuje vyšší kvalitu zboží.	0,724		0,129	0,234	0,114
038 Kvalitní zboží je vždy dražší.	0,675	0,258	0,124		-0,136
021 Pokud najdu vyhovující značku, neměním ji.		0,682	0,112		-0,16
015 Za kvalitní zboží jsem ochoten zaplatit více.	0,227	0,606		0,317	0,182
979 Vyplatí se připlatit si za kvalitní produkt.	0,125	0,605	0,275		0,123
022 Kupuji pouze velmi kvalitní výrobky.	0,401	0,518	-0,115	0,246	
879 Když objevím značku, která mi vyhovuje (která se mi líbí), mám tendenci u ní setrvat.	-0,128	0,364	0,764		
880 Myslím, že dobře známé značky jsou lepší.	0,339	0,206	0,706		
878 Když vidím novou značku, často ji koupím, abych viděl(a), jaká je.	0,29	-0,24	0,604	0,316	0,148
029 Rád(a) zkouším nové značky výrobků.	0,358		0,114	0,746	
030 Čtu si údaje na obalech výrobků.	-0,156	0,286		0,727	
008 Při nákupu se řídím pouze druhem zboží, nezáleží mi na značce.					-0,871
001 Dávám přednost značkovému zboží.	0,329	0,241	0,103	0,207	0,641

Zdroj: MML-TGI ČR 2016 1. - 4. kvartál SPOJENÁ (11.01.2016 - 18.12.2016), CS: CS Všichni

## **11. Příloha 3 – Perception of Food Quality by Consumers-Literature Review <sup>1</sup>**

### **11.1. Abstract**

This study aims to analyse the elements which contribute most to defining the quality of a food product. The data analysis has made it possible to categorise consumers into two main groups: on the one hand those who mainly use criteria associated with organoleptic elements, and, on the other, those who make their choice based on place and methods of production. Both categories were studied with a view to identifying their distinctive socio-demographic and behavioural features. Geographical provenance, age, propensity to read the label on products, scientific knowledge and self-assessment of knowledge on food safety-related issues emerged as the main differences between the two groups. The perception of quality appears to affect purchase decisions and dietary patterns. The description of the consumer groups who use the same elements to define quality provided a useful insight into consumer choices and potential risk-exposure behaviours. The study of these aspects is therefore relevant for designing effective and targeted communication actions, not only for companies but also for public institutions in charge of safeguarding public health.

**Keywords:** quality label, information needs, consumers' perception

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<sup>1</sup> Sadílek, T. (2019). Perception of Food Quality Labels by Czech Consumers. *European Research Studies Journal*. 22 (1), 57-67.

## **11.2. Introduction**

### **11.2.1. Food quality perception**

Several studies have highlighted the fact that definition of quality is not unified but depends, rather, on the different perspective from which it is assessed: a definition in technical and production terms may differ from the consumers' perception (Steenkamp, 1990). From the consumers' point of view, in fact, several aspects contribute to defining the quality of a food product: these are not only intrinsic qualities such as taste and other organoleptic properties, but also external factors such as origin and labelling (Bernués et al., 2003; Grunert, 2002; Verdú et al., 2004). One theoretical model that seeks to combine these aspects with a view to understanding the motives and values that drive consumer satisfaction and hence consumer purchasing choices is the Total Food Quality Model developed by Grunert et al. (1996). The model consists of a horizontal dimension based on the element of time which distinguishes between quality perception before and after the purchase (expected quality and experienced quality) and a vertical dimension which describes intention to buy based on consumers' perception of quality. Intention to buy derives from a compromise between three factors: expected quality, based on the perception of the product's intrinsic and extrinsic indicators, the expectation of satisfaction at the time of purchase and the product's perceived cost. There is therefore a strongly subjective component in the concept of quality that is linked to the consumer's perception and is influenced by the various characteristics of the product. Quality assessment plays a key role in the model, not as an end but to the extent that it satisfies purchase motives and the values associated with them.

Perception of the product's attributes has important repercussions on consumer expectations and conversely the values sought and expected by consumers have an impact on the most desired dimensions of quality and the way in which the various attributes are perceived and assessed. The process which starting from the product's attributes and via expected quality eventually leads to purchase motives brings into play increasingly abstract cognitive categories. The Total Food Quality Model considers quality as an abstract and multidimensional construction, characterised by four fundamental and closely interrelated dimensions: the hedonic characteristics of food, health, convenience and the production process. Differences in quality assessment have many consequences, both in terms of behaviours, beliefs and attitudes on the part of consumers, and about the use and search for information when choosing a product.

Expectation of quality ultimately affects dietary patterns, the ways in which food is prepared, as well as current and future purchase decisions (Brunsø et al., 2002; Grunert, 2005).

### **11.2.2. Food quality and food safety**

Over the past few decades there has been a growing demand for safe and high-quality food. Rapid economic development and recent changes in the food supply chain have contributed to increased interest in the issue of quality in the food sector. In the mind of consumers, the concept of a food product's quality appears to be closely related to the perception of its being safe. A recent study, investigating the relationship between food quality and food safety, has highlighted that people seem more prone to regard a food product as safe if they consider it as being high quality rather than the opposite (Van Rijswijk & Frewer, 2008). Concern regarding the safety and quality of food products involves every stage of the production chain. The debate around these topics has focused on several aspects of the product: from organoleptic characteristics to health and hygiene safety, from healthiness and nutritional qualities to place of production and the ethical aspects associated therewith. Faced with requests for reassurance and information by increasingly demanding consumers, European and domestic public entities have responded by passing legislation such as the standards pertaining to product traceability and labelling (Savov & Kouzmanov, 2009). In order to guarantee the quality and safety of products, a variety of international regulations have been introduced, including ISO 9001 (International Organization for Standardization) standards, defining the requirements which a quality system needs to have in place in order to ensure control throughout the production process and prevent or detect any non-conformities; as regards operational tools there is the HACCP (Hazard Analysis Critical Control Points) system, whose purpose is to achieve self-checking objectives (Pham et al., 2010; Ramphal & Simelane, 2010).

### **11.3.      Certifications and quality brands**

Quality has become a key element on which the Italian food market has strongly invested to differentiate itself and face the challenges from new international markets.

Certification and brand provide consumers with a set of indications regarding not only the product origin, but also the relevant production processes and other aspects, including safety, environmental and ethical aspects, all of which constitute the core of the quality concept

(Marino & Nobile, 2007). A Eurobarometer survey conducted in 2012 has shown that Italian consumers are the most attentive to quality labels in Europe, with 35% of Italian respondents stating that at the time of purchase they always check whether the product has quality labels guaranteeing specific characteristics.

This percentage is substantially higher than the European average figure of 22% (EU, 2012). Through communication and advertising, food companies have encouraged the association between traditional certified and organic products on the one hand and greater quality and safety on the other. The certified brand seems to provide consumers with a user-friendly way to choose a reliable product, especially during a time of economic recession and food scares, where consumers apparently show less trust in production processes, imported products and the effectiveness of controls (Ferretti & Magaudo, 2006). It should be noted, however, that consumers appear to be extremely diffident regarding food quality.

Discussions about new technologies applied in the food sector, especially with regards to genetic modification, have brought into focus the consumers' newly awakened interest in food productions and the general lack of knowledge about it (Grunert, 2002). The several food hazards encountered since the beginning of the 90s, have shaken consumers and drew their attention to the importance of food's traceability. Food safety issues often result from the asymmetric information between consumers and suppliers, with regards to product specific attributes (Ortega et al., 2011). Consumers seek for high quality food products and they infer this quality based on a certain group of indicators, or attributes, that are classified according to the degree of visibility, namely: search, experience, and credence attributes. More particularly, credence attributes are those that consumers can't ever evaluate with confidence but basing on consumers' opinions with regards to the product itself or the producer, even after consumption (Verbeke et al., 2006). Nowadays, to define food products' quality, consumers evaluate both intrinsic features of the product and external features, such as traceability, origin (COO), geographical indications and certification (Mascarello et al., 2015; Jover et al., 2004), and then choose foodstuffs according to elements that may characterize the product itself. The food label encloses a set of information that conveys to consumers the product's characteristics, this information can influence consumer' purchase behaviour.

Several studies point to the existence of a strong relationship between the food label and consumer reactions (Hoogland et al., 2007). The evolution of society, over the last forty years, has led to a radical change of needs and consumer behaviours. Through the purchase and the consumption, individuals express their own culture, they relate to the society, define their identity and show more and more attention to social and environmental aspects linked to

agriculture. The consumption processes evolve, and food products are evaluated both for their material values and for their symbolic and communicative value; the food product becomes a mean of communication and socialization. Most consumers say they are willing to pay more for a product they perceive as respectful of health, environment, innovation, quality, or considered ethically superior (Bialkova & Van Trijp, 2010; Grunert, 2011). Some details, therefore, may be sufficient to increase the perceived value of the product, such as new technologies for product traceability or product innovations. Under this scenario, the label is the most powerful tool for suppliers to convey information to the consumer (Banterle et al., 2013). The will to protect and promote food production, in the European Union, has allowed the development of an efficient traceability system. With this system of rules, it is possible to improve food safety and enhance consumer confidence, in addition to giving a higher value to foods, through the label which provides search, experience and credence information (Louriero et al., 2007).

However, the copious legislation in the Union, has not simplified the consumer ability to understand, easily, the quality credence attributes of foodstuffs. In addition, it is now ascertained that consumers perceive traceability as a further quality attribute to be considered at the time of purchase. It seems clear that traceability of food products falls among credence attributes. The Grunter's Total Food Quality Model (Grunert, 2002) considers food quality as a multidimensional construction characterized by four fundamental interrelated dimensions that are: hedonic characteristics of food, health, convenience and production process. Particularly, the dimension that relates to production processes uses food attributes that are typically credence attributes, because it is impossible for the consumer be aware of all the production process, through the agro-food production chain. Nevertheless, so far, what consumers look behind the word traceability was little investigated. The asymmetry between the comprehension of traceability by consumers and producers may need the adoption of certifications that easily communicate to the consumer information on agricultural practices beneficial for the climate and the environment. Indeed, the consumer has increasingly used the criterion of personal trust to a specific certification. For example, in Italy, the quality features of a product are often connected to local productions or local foodstuffs (Aprile et al., 2016). Local food is perceived as characterized by a large variety of benefits, that range from the satisfaction of enjoying a homemade authentic food product, to the local-food intrinsic ability to enhance the sustainability of the food system, reducing the carbon footprint and providing new market opportunities for local farms (Guerrero et al., 2009).

The labelling of food products, therefore, becomes more and more a strategic element for product differentiation in the entire supply chain, since it affects the strategic behaviour of producers, of those who become part of the supply chain and the label's evolution itself. This, compared to the past, relates to agricultural firms and to agro-food industries: the label role is crucial to provide correct information about food products, and do not incur in conflicts of interest among different stakeholders (i.e. researchers, manufacturers, public authorities, and others). Since no studies in the Czech Republic about consumer insight and their preferences about information provided on foodstuffs labelling and the meaning that they give to the concept of traceability, consumers' preferences were studied about a set of quality attributes of food products. To ascertain the existence of the asymmetric information between producers and consumers, with regards to traceability, the objective of this study is to gain insight in how the consumer recognizes the traceability and the links among food attributes shown in the label, when he/she evaluates the quality of foodstuffs.

#### **11.4. EU and National quality labels**

Nevertheless, some generalizations are valid for other labels as well: The primary information source for all relevant topics with respect to food labelling seem to be the Internet (but not for food in general). It is by far the most important source where consumers will look for information. Not all of them can be motivated to get more information about food in general and quality labels. But there is a core group of consumers which is especially eager to acquire information. The size of it might differ and depend on the overall publicity, actual developments in the food sector like food scares, and their severity as discussed by Böcker & Hanf (2000), technological developments in food processing, general trends in food consumption, or related factors. For other quality labels the size of the group might differ, but in general, some important characteristics of the group members could be identified. They are using multiple information platforms, discuss with family and friends, but new forms of communication (social media, mobile apps) are – up to now – of only minor importance for this core group. The group seems to be more interested in all food related topics and its members are a little bit.

Consumers usually are unable to evaluate the quality of food products before purchase, they use quality cues like brands, prices or labels (Steenkamp, 1990; Grunert & Aachmann, 2016). For helping consumers within their evaluation of quality, the EU introduced important quality

(origin) labels, namely PDO (Protected Designation of Origin) or PGI (Protected Geographical Identification) and TSG (Traditional Specialty Guaranteed).

In addition, each country is using national quality labels. EU food labelling has different aspects, e.g., to fulfil traceability requirements, nutrition labelling, serving promotional goals, etc. (Cheftel, 2005). As Cheftel (2005) points out the “diversity and complexity (of food labels and regulations) is due to the different objectives and requests from the various stakeholders”. Some of the food labels try to inform consumers about certain aspects (e.g. GMO free), contain nutritional information, trade-related information, or quality grading, just to name a few (Cheftel, 2005). This led, intended or unintended, to a huge variety of different EU and national labels officially in use – not to name all other private based labels – more and more confusing consumers.

Through consumption, individuals express their own culture, they relate to the society, define their identity and show more and more attention to social and environmental aspects linked to agriculture. The consumption processes evolve, and food products are evaluated both for their material values and for their symbolic and communicative value; the food product becomes a mean of communication and socialization. Most consumers say they are willing to pay more for a product they perceive as respectful of health, environment, innovation, quality, or considered ethically superior (Bialkova & Van Trijp, 2010; Grunert, 2011). Some details, therefore, may be sufficient to increase the perceived value of the product, such as new technologies for product traceability or product innovations. Under this scenario, the label is the most powerful tool for suppliers to convey information to the consumer (Banterle et al., 2013). The will to protect and promote food production, in the European Union, has allowed the development of an efficient traceability system. With this system of rules, it is possible to improve food safety and enhance consumer confidence, in addition to giving a higher value to foods, through the label which provides search, experience and credence information (Louriero et al., 2007).

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## **11.5. Discussion and Conclusion**

Based on earlier research (Asmalovskij & Sadílek, 2016), Czech consumers consider the most important aspects to be the product's sensorial characteristics (taste, appearance and freshness of the product). It is interesting to note that other studies conducted internationally have identified those same sensorial characteristics as the main drivers of food choices (Honkanen & Frewer, 2009). These results appear to confirm the connection between expected quality cues and the intention to buy proposed by the Total Food Quality Model. Moreover, they seem to be in line with the results of other research which identified a close relationship between the quality of a food product and the reason for its purchase (Keningham et al., 2005). In recent years consumers have started to appreciate typical products and to see this aspect as a distinctive feature associated with an assurance of higher quality (Mattiacci & Vignali, 2004). Moreover, the interest shown by consumers in the origin and place of production of food has grown (Dimara & Skuras, 2003), especially about European Quality Food Certification (Aprile et al.,

2012) products. Quality assessment is a complex process and the consumer often experiences a feeling of uncertainty because some aspects of the product are difficult to appraise because of the lack of information at the time of purchase (Grunert et al., 1996). International studies have shown that quality brands and certifications of origin are important indicators which, by guaranteeing some of the product characteristics, make it easier for consumers to judge and strengthen their perception of its quality (Grunert, 2002; Ilbery et al., 2005; Verbeke et al., 2007). Certification and brand provide the consumer with product information concerning not only provenance, but also – according to a more complex and general model – some social and ethical aspects.

Many surveys have shown that, especially when there are food emergencies caused by food scares, the brand emerges as a guarantee for product safety (Yeung & Yee, 2010). The perception of safety in food is in fact closely associated with the concept of quality (Van Rijswijk & Frewer, 2008). However, the recent scandals involving the food industry and diffidence towards the industrial production system of the globalised market may have exacerbated the distrust felt by consumers of food produced by large corporations.

Assessment of food products and being able to characterise the consumers influenced by them is a fundamental step, firstly for the companies dealing with market analysis and product positioning. In an age of strong market competition not only at the European level, a competitive policy emphasising product differentiation could provide a major opportunity for the Czech market. The hedonic aspect associated with food and the pleasure of eating well is still a crucial aspect for Czech consumers, for whom culinary traditions are still very important. Another central aspect shown by the study, however, is the importance of the production processes and place of production of food products. It is thus essential for the various stages of the food production chain to be efficiently coordinated to create, maintain and enhance the elements of differentiation on which the consumers' perception of quality is based. Today the competition in the food business involves not only safety control and efficiency but also the ability to adding value. The concept of adding value is strictly customer oriented: the effort to enhance the value of a food product is aimed at increasing consumers' perception of the product's quality. It is therefore important to ensure that, along with the food product itself, customers should be offered an appropriate flow of related services, and particularly information, to help them develop a clearer perception of the product's material and immaterial characteristics. Communication makes a key contribution to building, sustaining and enhancing over time the reputation and appreciation of a food product and of the processes, services and other features that consumers look for and seek assurances on. To be effective, however,

communication strategies must consider always the different target audiences to which their communication is aimed and consider their characteristics, behaviours and preferences. The sensitivity of older people on products' origin and production process could be an interesting point, such as the geographical differences emerged in this study. An understanding of the expected quality of a product is also important for the institutions in charge of public policy on food safety and consumer protection. This paper has highlighted some important trends in Italian consumers' definition of food quality taken as a general and multi-dimensional concept. The subjective perception of quality is in fact related to a complex system of cultural codes and value systems which are nevertheless integrated in the consumers' daily choices (Holm & Kildevang, 1996). The goal of the institutions concerned with public health protection is to provide consumers with the appropriate tools to be able to assess the safety and quality of food products based on knowledge of scientific evidence and the real risks associated with food products alongside their subjective perceptions. Communication once again plays a crucial role in this respect, and the segmentation into groups of consumers showing different perceptions and habits is therefore fundamentally important when designing effective and targeted actions aimed at reducing uncertainty and promoting healthy behaviours (Verbeke, et al., 2007; Verbeke & Vermeir et al., 2007).

## 11.6. Literature

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## 12. Příloha 4 – Importance of Food Quality Labels Included in the European Union Quality Schemes <sup>2</sup>

### **Abstract:**

**Purpose** - The paper deals with European Union quality schemes of Protected Designation of Origin, Protected Geographical Indication and Traditional Speciality Guaranteed labels, that are used in agricultural and food products sector. The goal of the research is to analyse the utilization of these labels in the European Union market according to selected criteria, including type of label registered in each country, number of agricultural products, and foodstuffs registered as quality labels in total.

**Design/methodology/approach** - Secondary data from the Database of Origin and Registration are used. Sample consists of 1,356 labels registered in this database to 5th October 2018. The frequency of utilization of labels is analysed according to country, type of label, and product classes.

**Findings** - As results show, the highest number of product names is registered under PDO label followed with slight difference by PGI label. There are only minimum product names registered as TSG. Dominating country is Italy followed other Mediterranean countries like France, Spain, Portugal and Greece. Based on product class, the most common classes are fruits, vegetables and cereals (for PGI, PDO), cheeses (PDO) and meat products (TSG, PGI). This is confirmed by Pearson's chi-square test of independence to determine if significant differences do exist between frequency of labels used and mentioned criteria. A weak dependence between number of product names registered as PDO and between PGI and TSG, and country of origin were confirmed. A middle strong dependence between type of label and product classes where the label is registered, and strong dependence between country of origin and the most often registered product class exist.

**Research limitations/implications** - The number of certified products is continuously increasing. Their distribution between countries may change slightly over time. Only basic statistical methods were used in this research.

**Practical implications** - To local food producers, the findings provide a deeper insight to the EU market with food certified by PDO, PGI and TSG labels. It could stimulate their effort in

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<sup>2</sup> Importance of Food Quality Labels Included in the European Union Quality Schemes. *EuroMed Journal of Business*. Přijato k publikování dne 17.2.2019.

products certification. The PDO, PGI and TSG schemes bring benefits to consumers as well as to producers, because consumers are buying a product with specific value-adding qualities.

**Originality/value** - For EU and national authorities, food producers and scholars, this is systematic EU-wide analysis of food products registered in the DOOR database. The study demonstrates that protected food products must be conceptualised as evolving institutions and not as statically protected food systems. Furthermore, the investigation and registration of products should be encouraged among all EU Member States to allow the maintenance of important elements of the history, culture and heritage of the local areas, regions and countries.

**Keywords:** Labels, Quality, DOOR database, EU, Food

**JEL Classification:** M31, L15

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## **12.1. Introduction**

Quality label assists the imperfectly informed consumers in their decision process because it structures the information environment. In other words, a quality label transforms aspect of quality from credence to search attributes of food and is used as an extrinsic quality cue (Van Trijp et al., 1996). To allow producers to use the added value of their products as effectively as possible, and to facilitate consumers' choice of food products, since 1992, the EU has established quality labels system known as Protected Designation of Origin (PDO), Protected Geographical Indication (PGI) and Traditional Speciality Guaranteed (TSG) to protect the names of these products (EUFIC, 2013; European Commission, 2012a). These three schemes have built on a long history of regional and traditional specialities, especially in southern European countries (Teuber, 2014). The PDO, PGI and TSG labels aim to provide consumers with clear information on the product origin or speciality character, enabling them to make more informed purchases and the best possible choices (Verbeke et al., 2012). Offering food products with identifiable specific characteristics and providing more information and guarantees have become necessary to satisfy consumers and reduce their uncertainty. Therefore, many European Union (EU) countries have begun to emphasize the origin of their products and have developed consumer protection strategies involving food origin labels utilization as a guarantee of food quality and safety (Velčovská, 2018).

EU quality labels scheme identifies agricultural products and foodstuffs farmed and produced to exacting specifications. It includes Protected Designation of Origin (PDO) and Protected Geographical Indication (PGI) for agricultural products and foodstuffs as well as for wine and spirits (there are different rules for wine and spirits and they are not included in our analysis), and Traditional Speciality Guaranteed (TSG) for agricultural farm products and foodstuffs. While a PDO covers agricultural products and foodstuffs which are produced, processed and prepared in a given geographical area using recognised know-how, a PGI indicates a link with the geographical area in at least one of the stages of production, processing or preparation. The link with the area is therefore stronger for PDO; PGI is a more flexible regulation. For PDO food products, management conditions are regulated by very strict rules with the aim of obtaining high quality process (European Commission, 2013c), the link with the area is stronger; PGI is a more flexible regulation. A TSG highlights a product's traditional character, either in the composition or means of production. According to Regulation on EU quality schemes for agricultural products and foodstuffs since 2013, to be "traditional" proven usage on the market during at least 30 years is now required (European Commission, 2012a; Becker

et al., 2008; Fandos et al., 2006). A list of products assigned by quality labels PDO, PGI or TSG is included in the DOOR database.

The rest of the paper is structured as follows: next chapter presents the literature review, then Material and methods presenting dataset and methods of statistical analysis. Section Results describes main findings of the paper and discusses the measurements of variables. Discussion compare findings of the research with articles published previously. Conclusions and propositions for future research are offered in chapter Conclusion.

## **12.2. Literature review**

Perception of food quality labels by customer distinguishes between subjective and objective understanding. Subjective understanding is the meaning the consumer attaches to the perceived label information and covers also the extent to which consumers believe they have “understood” what is being communicated. Objective understanding is whether the meaning the consumer has attached to the label information is compatible with the meaning that the sender of the label information intended to communicate (Grunert and Wills, 2007). Food quality labels are determined to promote and protect food products and should be a guarantee of products’ quality, their geographical origin, specific characteristics and/or production methods (Velčovská et al., 2015). They give a legal protection of a product against imitation throughout the market and eliminate the misleading of consumers by non-genuine products, which may be of inferior quality. Food quality labels also help producers to obtain a premium price for their authentic products, and finally they should give clearer information to consumers about product characteristics and facilitate identification of food products with certified quality (European Commission, 2012b). With the renewed consumer interest in traditional foods, food producers all over Europe discuss whether an increased use of EU quality schemes (PDO, PGI and TSG) would be a useful tool in their overall marketing strategy, whereas authorities have an interest in the function of these schemes as an aid for consumer decision-making (Grunert and Aachmann, 2016). On the other hand, awareness of PDO, PGI and TSG brands among EU countries is quite low (Fotopoulos, 2001; Velčovská, 2018).

The perception of food quality can be influenced by the product origin and mediated through the labelling. Consumers pay more attention to quality labels also in such situation when the product is unbranded, or the brand is not familiar (Iop et al., 2006). Quality beliefs are shaped by an interest in getting information about product quality through the quality label (Verbeke et al., 2012) and consumers would be willing to pay more for a traditional food product with a

certified quality label, than for a product without one (Padilla et al., 2007). According to Verbeke et al. (2012), relation between food quality and quality labels is following: (1) Customers are interesting in origin of food, then (2) they have interest in getting information about product quality through quality labels and (3) if they belief that the quality label signals better quality or a distinct product character, then they use the quality label.

In the context of the topic, the terms “food quality” and “quality labels” are explained, followed by the specification of surveyed labels PDO, PGI and TSG. Quality label is a term for a symbol that can be put on a product or its packaging indicating that the product or the process to make the product complies with given standards and that this compliance has been certified (Velčovská et al., 2015; United Nations, 2007). Quality labels guarantee compliance not only with current standards, but also with additional quality criteria determined in a corresponding certification system. A quality labels give added value to the products and are usually used in communication with end consumers (European Committee for the Valve Industry, 2012). According to (Grunert, 2005), quality labels are an ambiguous category that covers many different things. They can be divided into obligatory (determined by legal rules and compulsory for all products in a given product category) and voluntary labels (bring competitive advantage for a product), into general (address all product quality characteristics) and specific labels (focused only on quality characteristics), or into regional, national, international and global labels. They can cover quality, safety, organic origin and other characteristics of product (Grunert, 2005; Velčovská et al., 2015; Velčovská, 2012). More about influence of quality labels on its regional distribution offers (EUFIC, 2013; Parrot et al., 2002; O’Connor and Company, 2005; Espejal et al., 2008; Košičiarová et al., 2016; Fandos-Herrera, 2016).

Different food labelling schemes co-exist with the aim of informing customers and providing trust in different quality characteristics of food products. But consumers clearly valued labelling schemes that are regulated by EU law (Gracia and de-Magistris, 2016), involving Protected Designation of Origin (PDO), Protected Geographical Indication (PGI), and Traditional Speciality Guaranteed (TSG) labels.

Research studies dealing with the topic of food quality labels are focused only on partial aspects of quality labels like analysis of food products registered as PDO, PGI and TSG in selected countries (Nagyová et al., 2011; Velčovská et al., 2012), analysis of customer loyalty and buying intention for PDO label (Espejal et al., 2007), consumer awareness and perception of labels (Verbeke et al., 2012; Chrysochou et al., 2012), consumer behaviour (Parrot et al., 2002), customer satisfaction (European Commision, 2013b), or impact of labels on customer loyalty (Blaikie, 2003). However, food quality is typically defined in terms of “taste”, “good product”

associated with a “proper production method”, “natural/organic” and “freshness” (Velčovská, 2018). For most consumers, quality and safety are clearly related. Nowadays, consumers expect their food mainly to be safe, wholesome, tasty, and typical, i.e. linked to tradition and land (Lazzaroni, et al., 2013; Popescu et al., 2011).

There is a lack of the studies evaluating number and structure of food products assigned by PDO, PGI and TSG labels. There is a knowledge gap regarding the systematic wide analysis of PDO, PGI and TSG labels included in the DOOR database. This paper aims to analyse the share of PDO, PGI and TSG labels in EU countries, chosen product categories, its structure and explain relations between country of product origin and number of registered products.

### **12.3. Material and methods**

The electronic DOOR database includes a list of product names (agricultural products and foodstuffs) registered as PDO, PGI or TSG as well as names for which registration has been applied. PDO and PGI cover also wine and spirits, however there are different rules for those products (Regulation (EC) No 1234/2007 for wines, Regulation (EEC) No 1601/91 for aromatized wine products, and Regulation (EC) No 110/2008 for spirits) and they are not included in DOOR database as well as other products out of Regulation 1151/2012 (Fandos et al., 2006). Geographical indications protected in the European Community for wines originating in member states and third countries are registered in E-BACCHUS database, geographical indications for spirits are listed in E-SPIRIT-DRINKS database.

Data processing and statistical analysis use a similar methodology like article of Velčovská and Sadílek (2014). This reason of the analysis is to find out and explain relations between country of product origin and number of registered products and share of PDO, PGI and TSG labels in EU countries. The secondary data from the Database of Origin and Registration (DOOR) were used.

Data are available on the following link: <http://ec.europa.eu/agriculture/quality/door/list.html> As exclusion criteria of search in the DOOR, only data regarding EU member states and data for registered products was considered because it is possible to search for products that are already registered or for which a registration was applied or published. In October 2018, DOOR database includes total number of 1,514 items, but some of them are on waiting list and there is not sure if they would be accepted (Espejal et al., 2008; Lucatelli, 1999) therefore, in our analysis we have calculated with sample of registered items only, i.e. 1,356 items. We must notice that in the database, there are not only European countries, but also China is represented

by 10 certified products, Thailand has three PGI labels, Vietnam, Colombia, and India have one registered product name. In the analysis, we proceeded descriptive statistics and contingency tables, where we tested relations with Chi-square test.

#### 12.4. Results and discussions

Research outcomes correspond with the date of 18<sup>th</sup> May 2018, when 1,356 product items certified with PGI, PDO or TSG label were registered in the DOOR database. Sample structure is presented in Table 1.

**Table 1 Sample characteristics of products registered in the DOOR database by EU countries, (n = 1,356, in per cent), first 90 % of cases**

<b>Type of Label</b>	PGI	45.05	<b>Country</b>	Italy	20.90
	PDO	50.88		France	17.2
	TSG	3.98		Spain	14.2
<b>Product Class</b>	1.6 Fruits, vegetables and cereals	27.3		Portugal	10.0
	1.3 Cheeses	17.3		Greece	7.6
	1.2 Meat products	13.2		Germany	6.5
	1.1 Fresh meat	11.4		United Kingdom	4.4
	1.5 Oils and fats	9.5		Poland	2.7
	2.4 Bread, pastry, cakes, other baker's wares	5.5		Czech Republic	2.1
	1.8 Other products of Annex I*	4.2		Slovenia	1.6
	1.4 Other products of animal origin**	3.3		Other	12.8
	Other	9.25			

\* Species, condiments, ciders, teas, etc.; \*\* eggs, honey, various milk products excluding butter etc.

In Table 1, the highest share has PDO label followed by PGI label. Number of registered PGI (611, i.e. 45.05%) and PDO labels (691, i.e. 50.88%) is relatively balanced, with the slight predominance of PDO. There is only marginal number of product names registered as TSG (54, i.e. 3.98%). Based on product class, the most of labels were awarded for fruits, vegetables and cereals. The most frequently certified products come from Italy (284 registered product names as PGI, PDO and TSG, i.e. 20.94% from all registered product names).

Frequency of PGI, PDO and TSG labels according to country is based on the list of all countries and product names registered in the DOOR database. The ranking of all countries according to total number of registered product names as PGI, PDO and TSG was created, see Table 2. Fields

with the highest number of registered product names under PGI, PDO and TSG are highlighted in grey colour. Because of this duplicity, the sum of per cent for TSG is higher and total sum of per cent is higher than 100%.

Concerning the number of products registered with EU quality scheme in European countries, the highest percentage of registered products belongs to the 28 EU Member States, accounting for 98.7%, 97.6% and 100% of the products registered as PDO, PGI and TSG, respectively. Based on the share of products registered as PDOs, PGIs and TSG in the DOOR database, the biggest cluster are Mediterranean countries (Italy, France, Spain, Portugal and Greece). These countries have together 69.9% of registered products in the database. One of the reasons appointed for these results is the high level of guidance and interaction; helping applicants with completing the application and giving them the best chance of success (Albuquerque et al., 2018; Becker and Staus, 2008).

The second biggest group are Western European countries (Germany, United Kingdom, Benelux) and the third biggest are Central and East European countries (Poland, Czech Republic, Slovenia). A marginal number of registered products in the DOOR database indicates Scandinavian countries.

The most common product class is 1.6 (Fruits, vegetables and cereals) which is dominant in Italy, Spain, Greece and Poland. Portugal and Slovenia have the highest number of registered products in class 1.2 (Meat products), France in class 1.1 (Fresh meat), UK in class 1.3 (Cheeses). As we expected, the Czech Republic excels in class 2.1 (Beers). Germany is the only country represented in the class 2.2 (Mineral and spring waters) and at the same time this product class is dominant for Germany.

To discover dependency between country of origin and the most often registered product class, we proceeded Chi-square test at significance level  $\alpha = 0.05$ , sig F = 0 and we can confirm, there are dependencies between set variables (country of origin and the most often registered product class). In the next step, the degree of association was measured between the same variables using Pearson contingency coefficient. Pearson C = 0.693, which means a strong positive dependence between country and the most often registered product class, i.e. each country has one important product class in which the most of domestic products is registered. Like the analysis of labels utilization by country of origin, we prove the most product types are registered in Italy, France and Spain. The most likely explanation is importance of these national food products at the global marketplace, where products like olive oils, cheeses, vegetable and fruit products play important role and these countries has a strong tradition of using this type of quality labels (Verbeke et al., 2012). Furthermore, this confirms findings of Albuquerque et al.

(2018), that most of the geographical indications have been registered in France, Italy and Spain because of by robust institutional frameworks and the importance of origin products and terroir in those countries.

**Table 2 Numbers of product names registered as PGI, PDO and TSG according to countries, (n = 1,356, in per cent)**

Country	PGI	PDO	TSG	Total
1. Italy	8.63	12.17	0.15	<b>20.94</b>
2. France	9.88	7.23	0.07	<b>17.18</b>
3. Spain	6.49	7.45	0.29	<b>14.23</b>
4. Portugal	5.24	4.72	0.07	<b>10.03</b>
5. Greece	2.06	5.53	0.00	<b>7.60</b>
6. Germany	5.60	0.88	0.00	<b>6.49</b>
7. United Kingdom	2.43	1.77	0.22	<b>4.42</b>
8. Poland	1.47	0.59	0.66	<b>2.73</b>
9. Czech Republic	1.70	0.44	0.35	<b>2.14</b>
10. Slovenia	0.81	0.59	0.22	<b>1.62</b>
11. Belgium	0.74	0.22	0.37	<b>1.33</b>
12. Austria	0.44	0.66	0.07	<b>1.18</b>
13. Hungary	0.52	0.44	0.07	<b>1.03</b>
14. Netherlands	0.37	0.44	0.07	<b>1.03</b>
15. Slovakia	0.74	0.07	0.22	<b>1.03</b>
16. Finland	0.15	0.37	0.22	<b>0.74</b>
17. Lithuania	0.29	0.07	0.15	<b>0.52</b>
18. Sweden	0.22	0.15	0.15	<b>0.52</b>
19. Bulgaria	0.15	0.00	0.29	<b>0.44</b>
20. Denmark	0.44	0.00	0.00	<b>0.44</b>
21. Ireland	0.29	0.07	0.00	<b>0.37</b>
22. Latvia	0.07	0.07	0.22	<b>0.37</b>
23. Cyprus	0.29	0.00	0.00	<b>0.29</b>
24. Luxembourg	0.15	0.15	0.00	<b>0.30</b>
25. Romania	0.15	0.07	0.00	<b>0.22</b>
Total	<b>50.96</b>	<b>45.06</b>	<b>3.69*</b>	<b>100.35*</b>

\* The Czech Republic and Slovakia have registered four same product names as TSG.

In Table 2, 25 from 27 EU member countries have registered their product names as PGI, PDO or TSG in DOOR database. The first six countries of ranking in Table 2 (i.e. 22% of all EU countries) have obtained PDO, PGI and TSG labels for 80% product names registered in DOOR database (interestingly, the Pareto rule is shown here). The first three countries in the ranking, Italy, France and Spain, then have more than 50% of all registered product names. Italy has registered the highest number of product names as PDO; France is the first in number of PGI

labels. It is interesting, that most of TSG labels belong to countries in weaker positions in the overall ranking, i.e. to Poland, Slovakia, Belgium and the Czech Republic.

To discover reciprocal dependences of tracked characters, we proceeded Chi-square test at significance level  $\alpha = 0.05$ , when  $\text{sig } F = 0$ , and we can confirm that variables depend reciprocally. The highest distribution of all labels is in Italy, France and Spain. This is influenced by well-known gastronomic specialities as well as national cuisine of these countries, which have built on a long history and are popular around the world (Velčovská and Sadílek, 2014). Overall, these countries have higher impact on global food marketplace, comparing with countries such as Luxembourg, Ireland and Lithuania, whose food products are not so popular in customers' minds or Belgium, Poland and Norway are countries without a strong emphasis on using these quality labels in their agricultural and food quality policies (Verbeke et al., 2012). Relations in the sample are described by Pearson contingency coefficient (0.520) and Cramer's contingency coefficient (0.430), thus there is weak dependence between number of product names registered in the database and country of origin. This finding is also confirmed by previous researches of Velčovská (2012) and Becker (2009), that Southern European countries such as Italy and Spain, which are clearly PDO oriented, in contrast to the Northern and Eastern European countries which are more food-quality assurance scheme oriented and are catching up with respect to the PDO label.

In the last step of analysis, EU countries were compared by numbers of product names registered in the individual product classes to know which product class is the most typical in each country. Because of too high number of items in the DOOR database, we have decided to focus only on countries which have registered more than 15 product names. This is ten first countries mentioned in Table 2 which have registered 87% (1,180) items as PGI, PDO and TSG (in October 2018).

## **12.5. Discussion**

In the literature, PDOs, PGIs and TSGs are usually modelled as a signal of high quality in a vertical differentiation context. In some countries, importance of PDOs, PGIs and TSGs is very high. For instance, in leading countries such as France, Italy and Spain a high share of wine is sold under PGIs and important factors for this are soil, climate and traditional know-how, then there is a high importance of geographical location (Sadílek, 2016). One of the reasons appointed for these results is the high level of guidance and interaction; helping applicants with completing the application and giving them the best chance of success (Albuquerque et al., 2018). The



reason why countries such France, Italy and Spain dominate, is also long tradition of protection their food products prior nowadays European Union Quality Schemes. For instance, higher number of registered cheeses might be explained by more complex processing steps that are rather affected by technology evolution and thus the need for adaptation, technological innovations or just to react to customer needs (see Belletti et al., 2017; Bérard et al., 2016; Clark and Kerr, 2017). In the Mediterranean countries is also very strong influence of consumer ethnocentrism (Verbeke et al. 2012), which involves the translation of cultural and ethnic identity feelings into purchasing behaviour that favours national over foreign products (Resano et al., 2007; Shimp and Sharma, 1987).

Furthermore, it also demonstrates that the concept of collective quality marks appears to be well known in these countries, and the producers in general are well prepared for building up a consortium and registering their products (Becker et al., 2008). According to Grunert et al. (2016) this could also be a result of the higher levels of awareness in Southern Europe compared to other regions of Europe. This is also supported by robust institutional frameworks and the importance of origin products and terroir in those countries (Quiñones Ruiz et al., 2018; Allaire et al., 2011; Kireeva, 2011; Marie-Vivien et al., 2017). There also exists a real impact on national economies because smaller producers of agricultural and food products can benefit from well-established reputation of EU-wide known quality labels and can manufacture products with added value and differ from their competitors. Furthermore, it can affect positive impact on regional development in form of new jobs. Thus, an adaptive governance regulating the stability of material and information flows is needed to gauge the territorial identity of the product, to prevent over-exploitation of local resources and to ensure a fair distribution of costs and benefits among involved stakeholders (Brunori et al., 2016).

Success of utilization of European Union quality schemes is influenced by perception of quality in certain European countries. In southern Europe, customers willing to pay more for acquiring a good from an origin, but in northern Europe quality is associated more with a set of rules on safety, integrity, or conformity to industrial processes and there is not needed to support traditional know-how of certain geographical origin (Lucatelli, 1999). Another case are French wines, that names are well-known, that further geographical protection is not needed, because there are well-promoted brands (for instance Chateau Margaux, Georges Duboeuf, Mouton-Cadet). Therefore, systems of geographical indication are under continuous adaptation pressure, which can result in conflicts or frictions regarding the rules of the product specification (Quiñones Ruiz et al., 2018). Consequently, decisions made for changing specifications may be

regarded as a powerful sign of existing pressures in local food production systems (Bérard et al., 2016).

Number of registered products in each country influences consumers' interest in the origin of foods and interest in support for the local economy in food production (Lusk et al., 2006). Consumers might prefer products from certain regions or countries since they are believed to be simply better (more tasty, safer, healthier, more sustainable) (Dekhili et al., 2011) or products from their own region or country, because of loyalty to it and/or animosity towards others, or because of a related preference to support the local economy rather than remote or foreign economies. Food quality labels utilize consumers' beliefs that the quality label signals better or superior quality, and the belief that the quality label signals a distinct product character (Verbeke et al., 2012).

Further investigations should address consumer preferences, knowledge and attitudes, especially in areas with a lower number of registered products, such as Northern Europe or Eastern Europe. Moreover, the investigation and registration of products should be encouraged among all EU member states to allow the maintenance of important elements of the history, culture and heritage of local areas, regions and countries. Aside from the theoretical and managerial contribution of the study, there are some limitations. The sample size of product names from DOOR database is related to 5th October 18, 2014, but number of PGI, PDO and TSG labels registered in the DOOR database is continuously increasing, and the distribution of the labels between countries may change slightly. Further, we used only basic statistical methods in the study and in future, would be better to investigate how number of certified products is changing in time.

## **12.6. Conclusion**

Presented paper deals with analysis of European Union quality label schemes known as PDO, PGI and TSG that used in agricultural and food products sector. Data from the DOOR database and statistical methods were used for obtaining outcomes. The main contribution of the paper is a comprehensive view on the topic, the comparison of summarized data according to selected criteria including country of origin, type of label and product class, and statistical testing of relations between usage of the labels and mentioned criteria. As results show, the highest number of product names is registered under PDO label followed with slight difference by PGI label. There are only minimum product names registered as TSG. Dominating country is Italy followed by other Mediterranean countries like France, Spain, Portugal and Greece. The reason

for this could be a long history of regional and traditional specialities in these countries and a higher importance of these products (such olive oil, cheeses, vegetable products and other) on the global marketplace (Sadilek, 2016). Based on product class, the most common classes are Fruits, vegetables and cereals (for PGI, PDO), Cheeses (PDO) and Meat products (TSG, PGI). In various countries, different product classes dominate but most frequent are, in consistency with previous results, classes Fruits, vegetables and cereals (Italy, Spain, Greece and Poland) and Meat products (Portugal and Slovenia). Beer is the most typical product class in the Czech Republic. Statistic testing has confirmed weak dependence between number of product names registered as PDO, PGI and TSG and country of origin, middle strong dependence between type of label and product classes where the label is used, and strong dependence between country of origin and the most often registered product class.

Original and traditional agricultural and food products can be perceived as an important part of tradition and image of the region. The PDO, PGI and TSG schemes bring benefits to consumers as well as to producers. Consumers are assured they are buying a genuine product with specific value-adding qualities. Producers benefits perceives in fair competition, protection, and promotion of their products. To take full advantage of these benefits, producers should communicate their products with the value-adding attributes and highlight the specific character of their products to consumers, enabling them to make more informed purchases and the best possible choices. The aim of the communication campaign should be to build awareness, credibility and favourable perceptions about quality and distinctiveness of PDO, PGI and TSG products, and to stimulate consumers' interest in such products.

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### **13. Příloha 5 – Benefits of Regional Food Quality Labels for Czech Producers<sup>3</sup>**

#### **Abstract**

The objective of this paper is to evaluate the benefits of regional food quality labels for producers using the example of the Czech quality label, Regionální potravina (Regional Food). To do so, a telephone survey was carried out on a sample of 208 Czech food producers who have acquired the Regionální potravina quality label for some of their products. The results show that the producers have seen a positive improvement in sales following acquisition of the quality label, although they have not noticed greater interest in their products during campaigns to support awareness of the Regionální potravina quality label.

#### **Keywords**

Benefits; quality labels; producers; Czech Republic;

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### **13.1. Introduction**

In the last few decades, ever more consumers are choosing food products based on their local and typical attributes as well as environmental and ethical issues (Zander and Hamm, 2010). This trend reflects public concern for safety, healthiness, sustainability and social issues in food production practice (Vermeir & Verbeke, 2006). Therefore, policymakers and the food industry have introduced several strategies to help consumers choose quality food and guarantee product quality (Resano et al., 2012; Moshini et al., 2008). Such strategies include quality scheme and quality labelling (Aprile et al., 2012; Verbeke et al., 2012; Kuznesof et al., 1997).

Consumer interest in food knowledge is basic, and information plays an important role. Indeed, consumers' ability to perceive certain product characteristics may be weak, like in the case of geographical origin, production methods and locally produced foods. Label information and logo certification are becoming important for communicating the existence of characteristics consumers' desire.

There are different kinds of quality labels. In contrast to general quality labels, which present all product quality characteristics, specific quality labels focus on quality characteristics only, thereby guaranteeing the quality, safety, product origin, organic production, etc. Alongside international labels, each country has its own national and/or regional quality labels that are only relevant in a given country or region (Velčovská & del Chiappa, 2015).

### **13.2. Quality labels**

Quality labels are graphic symbols that can be put on a product or its packaging indicating that the product or the process to make the product complies with given standards and that this compliance has been certified (United Nations, 2007; Velčovská & Marhounová, 2005). They should guarantee the compliance of a product not only with current quality standards, but also with additional criteria determined in a corresponding certification system, including the way the product is made, country or region of product origin, specific composition of the product, healthy benefits of the product, etc. (The European Committee for the Valve Industry, 2007).

Nowadays, quality labels have become a central component of consumer policy. They are a valuable tool to manage and communicate a higher quality and safety of food products, to gain a competitive advantage in the market. The importance of quality labels has increased because of the crises and scandals (e.g. BSE – Bovine Spongiform Encephalopathy) that have

shaken the European food market over the past years, leading to a decline in consumer confidence in the safety and quality of food products (Grunert, 2005; Jahn et al., 2005).

Products labelling may result directly from the law or it may be a voluntary activity of a producer. Labels can be awarded by national certification bodies, government institutions (e.g. Ministry of Agriculture), independent organizations (e.g. association of organic farmers), or by private companies (Frewer & Van Trijp, 2007; Grunert, 2005). National quality labels can give to consumers the guarantee of superior product quality (Klasa), geographical origin or traditional production methods (Regionální potravina in the Czech Republic) or organic origin of a product (Product of Organic Farming in the Czech Republic) (Velčovská & Sadílek, 2014). They can be important in purchase decision-making. Consumers might prefer products from certain region or country since they are believed to be simply better. Another reason could be consumer ethnocentrism; consumers might prefer products from their region or country due to their loyalty to it or because of their preference to support the local economy (Verbeke et al., 2012).

Quality labels bring benefits to both, consumers as well as producers. They help consumers to reduce the uncertainty and their perceived difficulty to evaluate product quality (Bernués et al., 2003). Therefore, they can play a significant role in consumer decision-making process. They are a highly prized opportunity to impart information at the exact moment of food choice (Verbeke, 2005). They may generate positive associations to product. They facilitate the identification of the product origin. They should eliminate the misleading of consumers by non-genuine products, which may be of inferior quality. Further benefit lays in enabling choice between several alternatives, choice to be better in line with consumer's preference (Krissoff et al., 2004; Ward et al., 2003). The role of quality labels is seen as helping to form expectations about the quality before the purchase, which then can be confirmed or disconfirmed after the purchase (Saeed & Grunert, 2014). Generally, quality labelling is a means of addressing consumers and of providing them with information that is supposed to be relevant to their purchasing decisions (Zander et al., 2015). Consumers can thus make more informed choices about the food they buy.

To producers, quality labels give a legal protection of a product against imitation throughout the market, they are a tool of product differentiation and competitive advantage, and they can help producers promote the product with certified quality, increase a familiarity of product among customers and obtain a premium price for their authentic product (O'Connor & Company, 2005; Velčovská & Marhounová, 2005). They can also help increase of

customers' confidence in product, build customers' loyalty and increase sales of certified product.

When focused on food quality labels at the Czech food products market, survey of STEM/MARK agency from August 2014 has shown that not only professionals, but also consumers perceive the food quality labelling. However, there are a lot of quality labels in the Czech food products market, consumers are confused, and they do not know what these labels mean. The results revealed a low awareness of quality labels among consumers, minimum promotion of some labels and lack of information about them. Consumers are not able to fully use the labels in their purchase decisions and some of the labels are not perceived as credible. Czech consumers tend to prefer national or regional products rather than foreign products; the reasons are their interest in support of Czech producers or higher perceived quality of domestic products. Although consumers give more attention to the food products quality, the current trend in food products labelling with quality labels has led to the situation that instead of easier orientation of consumers in food quality, the effect is rather opposite. Many food quality labels, which are about forty in the Czech food products market, cause consumer confusion (Horáček, 2015).

It would be interesting to know the food producers' opinion on food quality labels and their perception of benefits or problems connected with this issue, unfortunately thus far the study from this perspective has not been undertaken. In the Czech food products market, consumers can meet a variety of quality labels covering the product quality, product origin, or other special characteristics of the product, the most commonly used are the Klasa label, Regionální potravina (Regional Food), Czech Product – guaranteed by Federation of the Food and Drink Industries of the Czech Republic, Czech BIO label – product of organic farming, Healthy Food, Protected Geographical Indication, Protected Designation of Origin, Traditional Speciality Guaranteed, EU Organic Farming, Fair Trade label, and Healthy Choice. National labels, mainly the Klasa label, Regionální potravina (Regional Food) and Czech Product are relatively familiar among Czech consumers, whereas the European quality labels have a low level of awareness (Ministry of Agriculture, 2015b). It is evident that the number of food quality labels in the Czech food products market is high and confusing for consumers.

### **13.3. Regionální potravina**

The Regionální potravina (RP) label is used to mark foods which are produced within a certain region of the Czech Republic and which are typical for that region. Between 2010 and 2011,

the label's strategic management was secured by the Czech Ministry of Agriculture. In 2012, some activities were transferred to the Czech State Agricultural Intervention Fund, which since that time has been responsible for promoting and administering the label. It is a label for food products which aims to support high quality, tasty, traditional and speciality foods produced by small and medium-sized producers of local foods from the different Regional Authority areas (Regions) of the Czech Republic. Producers receive a label through Regional competitions. These competitions are declared in all Regions of the Czech Republic (except Prague). The Regional Food label, which is put onto the package of an awarded product, is designed as a guarantee of its quality, traditional recipe, excellent flavour, and that the ingredients used in its production come from domestic production, or that the product is produced within the territory of the Region in which the award was granted, and with ingredients from that area. Fresher and better flavour and aroma is claimed to be assured by the short distribution path from the producer to consumers compared to foreign products which often must cross half the world before reaching the store shelves and subsequently the end consumers. Awarded products are subject to strict European and national requirements and are subject to great scrutiny by inspection authorities; as such, consumers can be sure that these products are foods of the highest quality. Foods bearing the label also have unique qualities compared to standard products on the market, such as the use of a traditional recipe typical for the Region, an original production process, or the use of special regional ingredients. The Czech Ministry of Agriculture also aims to support the development of different areas of the Czech Republic and increase employment within these areas.

As defined by this method, *Regionální potravina* is a product (food or agricultural product) designed for consumption by the end consumer which is produced within a region and which mostly comes from local ingredients. The campaign is focused on the products of small and medium-sized food businesses, i.e. companies with up to 250 employees. The Czech Ministry of Agriculture is the administrator of the Regional Food label, with its administration taken care of by Czech State Agricultural Intervention Fund. Its executive body is the assessment committee which assesses the submitted applications. They examine the technical documents, product photo documentation, package, label, etc. They also look at specific samples of the product to test whether it has the high quality and uniqueness of belonging to the specific region. The committee comprises a five- to eight-member team which includes representatives of the Czech Ministry of Agriculture, Czech State Agricultural Intervention Fund, the Federation of the Food and Drink Industries of the Czech Republic, the Agrarian Chamber of the Czech Republic and a member of the Regional Authority of the region. Decisions are made in the

assessment committee through absolute majority votes. Holders of the Regional Food label are entitled to use the logo for a period of 4 years.

**Figure 1 Regionální potravina (Regional Food) label**



By 19<sup>th</sup> October 2018, 869 products have been awarded by the Regional Food (Regional Food, 2018). The number of products certified with the Klasa label by product category is shown in Table 1.

**Table 1 The number of products and producers certified with the Regional Food label by product category (by 19<sup>th</sup> October 2018, in per cent)**

<b>Product category</b>	<b>Certified products (n = 869)</b>
Pastry	12.7
Alcoholic and non-alcoholic beverages	12.4
Others	12.4
Meat products	12.1
Dairy products	11.4
Fruit and vegetable	11.4
Confectionery products	10.6
Cheeses (including curd cheese)	9.6
Durable meat products	7.5

The most frequently certified categories are pastries, meat and meats, alcoholic and non-alcoholic beverages and others food products. Generally, there are similar shares of each product category, just cheeses (including curd cheese) and durable meat products have a share lower than 10%.

#### **13.4. Campaigns for Regionální potravina label support**

A communication campaign with the slogan “The Best of our Region” to promote the Regionální potravina label was run in 2012 and 2013 with its principal objective being to increase awareness amongst consumers of the label, and producers using the label, maintain a high level of domestic food production, and last but not least support the sale of foods from the

regions and from small and medium-sized producers within the different Regions of the Czech Republic. Thus, the consumer receives a clear guide for choosing food where they can be sure of their origins and freshness. Thus, the campaign placed stress on the origin of the food, quality, tradition, freshness and ensuring the public discovers the unique products which have been awarded the Regionální potravina label. The project aimed to support the positive development of regions and to emphasise that buying local foods reduces environmental impacts since the foods do not have to travel across half the world before arriving on supermarket shelves.

The Regionální potravina label was supported through a nationwide campaign including advertising, radio spots, audio visual spots at fairs and exhibitions, and a special 24-part series on Regions and their gourmet specialities broadcast by Czech Television. The campaign also included a travelling store project which travelled across all the Regions at weekends and during the summer offering awarded foods. The total sum spent promoting Regionální potravina came to 95 million Czech crowns.

The Ministry of Agriculture administers the website where consumers can receive all the information about the project, about winning products, events, rules and the competition timetable, and for certain producers there is also information on where their products can be purchased. Besides the above noted campaigns promoting Czech food with the Regionální potravina and Klasa labels, the Ministry of Agriculture also aims to support small producers with the Regionální potravina label in other ways.

At the start of the study, we posed the hypothesis: “By receiving the Regionální potravina label, producers have increased sales, but only slightly.” For products from Moravia, we were able to confirm this hypothesis. For products from Bohemia, however, we were able to reject this hypothesis. In this part of the Czech Republic, products saw a greater increase in sales than just a slight one in most cases (we consider a slight increase to mean up to 15%).

I see one possible explanation for this discrepancy in increased sales due to the label between the regions in the different levels of income and unemployment. However, after doing a correlation in Excel, neither different income levels nor employment levels are the reason behind the different results among the regions. In a comparison of average wages in the regions the producers operate and recorded differences in sales because of the Regionální potravina label, the Pearson correlation coefficient is - 0.15, i.e. a very weak negative linear correlation (this applies at a significance level of  $\alpha = 0.05$ ). When comparing levels of unemployment and difference in sales, an even smaller negative linear association was seen (- 0.05 at a significance

level of  $\alpha = 0.05$ ). One can thus conclude that neither average wages nor unemployment level have an impact on increased sales. A different reason might be the better dissemination of positive references on the specific producers we have looked at from Bohemia and their products amongst local consumers.

Compared to products from Bohemia, where only 17% think that the Regional Food quality label does not have a major impact on consumers' decision-making, almost 40% of producers from Moravia take this position, believing that quality, taste and how a product is presented are more important to customers than a quality label. It should be noted, however, that producers from Bohemia were undecided and more than a half, a full 62%, were unable to say whether a quality label had any impact on customers' purchasing behaviour. Five producers from Bohemia, and Moravia thought that the Regional Food quality label had a positive impact on their decision-making process and if they were not sure which product to choose they would choose that with the quality label.

On this matter, the following hypothesis was posed: "Producers believe that if the consumer knows that some of his products have the Regionální potravina label, then they prioritise them over similar products without a quality label." This hypothesis could not be confirmed or rejected. Most producers were unable to determine whether this was true. They did not know whether increased sales, if such an increase had been seen, were the result of acquiring the label or rather the result of positive reviews and good work. Only 23% of the surveyed producers from Bohemia and Moravia thought increased sales were a result of the label. As such a clear conclusion cannot be determined.

### 13.5. Methodology and data

A survey was conducted in January and February 2017 through a phone interview. The target population were food producers in the Czech Republic who has a label Regional Food for at least one of their products. The number of following producers is 400. The sampling was carried out by geographical area (Bohemia and Moravia) and is 208 and means 52% of a total population.

The information collected in our survey concerned label **Regional Food** (reason why to apply for the brand, differences in sales before and after brand obtaining, expectations of customers, support campaign recognition, sales area, advantages of the brand and requested support). A data set containing 208 completed questionnaires was. Exact structure of the sample is visible in Table 2.



**Table 2 Structure of the sample (in per cent)**

	<b>Number of producers</b>	
<b>Production</b>	<b>Bohemia (n = 119)</b>	<b>Moravia (n = 89)</b>
Dairy products	40	20
Meat products	30	20
Bakery products	25	25
Fruit and vegetable (fresh or conserved)	5	5
Others	14	19

Data from 208 respondents with the label Regional Food certification were analysed using IBM SPSS 21. Descriptive statistics, correlation analysis, t-test and chi-square were used for the purposes of the study.

First step was to analyse a number product of awarded by label Regionální potravina per producer. In this category, no big differences among producers from Bohemia and Moravia were discovered. In total, 47.6% of producers has registered 1 product, 21.6% of producers has registered 2 products, 3 products were registered by 16.8% of producers and only 14.4% of producers has registered 4 products.

Second question was about reasons to obtain a label Regional Food. For most producers (40.8%) make itself visible and communicate its products was the main motivation. Then mostly mentioned reasons were presentation of a products' quality (19.2%), prestige (16.8%), sales support and invitation by contest's organizers (14.4%) and finally recommendation of friends and a possibility to gain a positive ranking for grant (4.8%).

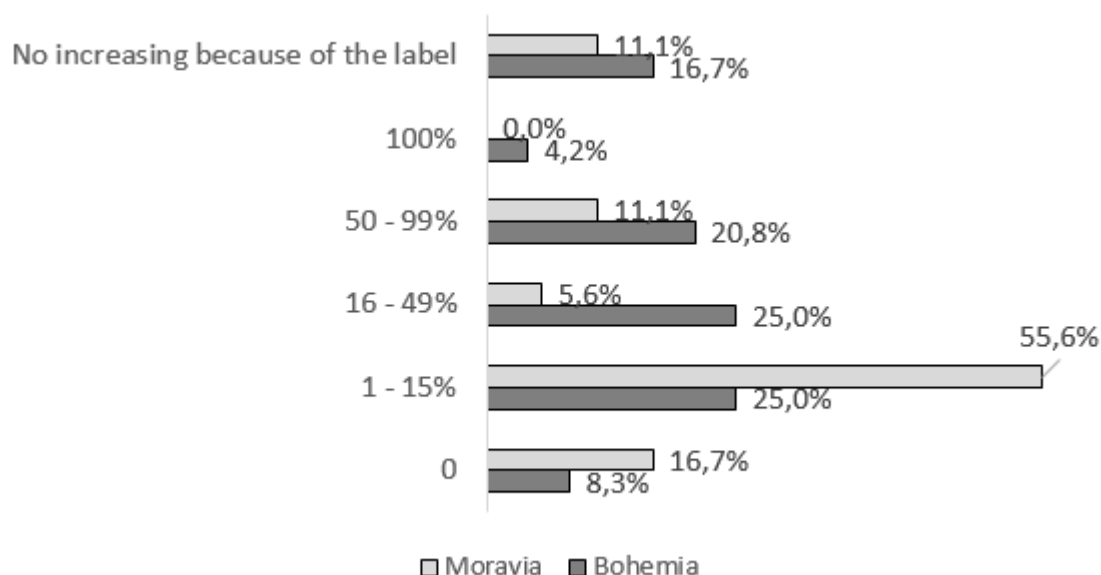
**Table 3 T-test for statements about reasons to obtain a label Regional Food (n = 208)**

<b>Reasons to obtain a label Regional Food</b>	<b>Totally agree</b>	<b>Rather agree</b>	<b>Neither agree, nor disagree</b>	<b>Rather disagree</b>	<b>Totally disagree</b>	<b>sig.</b>	<b>t-value</b>
Sales support	101	41	31	29	6	.00	15.43
Presentation of a products' quality	97	53	26	24	8	.00	13.36
Make itself visible	76	53	34	19	26	.00	53.09
Prestige	63	58	40	32	15	.00	12.21
Recommendation of friends	50	40	61	26	31	.00	33.98
Invitation by contest's organizers	45	49	46	46	22	.00	45.19
To gain a positive ranking for grant	31	28	99	26	24	.00	25.46

Using t-test, it was investigated how the respondents promoting the Regional Food label evaluated the statements. Significance level is higher than  $\alpha = 0.05$  for all the statements (t-test

and therefore the results of the t-test) are displayed for equal variances assumed (see Table 3). Then answers of respondents promoting the Regional Food label varies by statement and there are differences between answers.

**Figure 2 Increasing of sales due to label Regional Food**



**Table 4 Do customers prefer food products with Regionální potravina label?**

Do customers prefer food products with Regionální potravina label?	Number of producers	
	Bohemia (n = 119)	Moravia (n = 89)
Yes	25	25
No	20	35
I am not able to evaluate it	50	30

Compared to products from Bohemia, where only 17% think that the Regional Food quality label does not have a major impact on consumers' decision-making, almost 40% of producers from Moravia take this position, believing that quality, taste and how a product is presented are more important to customers than a quality label. It should be noted, however, that producers from Bohemia were undecided and more than a half, a full 62%, were unable to say whether a quality label had any impact on customers' purchasing behaviour. Five producers from Bohemia, and Moravia, thought that the Regional Food quality label had a positive impact on their decision-making process and if they were not sure which product to choose they would choose that with the quality label.

On this matter, the following hypothesis was posed: “Producers believe that if the consumer knows that some of his products have the Regionální potravina label, then they prioritise them over similar products without a quality label.” This hypothesis could not be confirmed or rejected. Most producers were unable to determine whether this was true. They did not know whether increased sales, if such an increase had been seen, were the result of acquiring the label or rather the result of positive reviews and good work. Only 23% of the surveyed producers from Bohemia and Moravia thought increased sales were a result of the label. As such a clear conclusion cannot be determined.

The last question was if producers are aware of the Ministry of Agriculture campaign. In terms of the two campaigns the Ministry of Agriculture ran over the last three years, 71% of producers from Bohemia were at least aware of the campaign, in contrast to Moravian producers, more than half of whom were not aware of the campaign. Comparing Bohemian and Moravian Regions, the result for Moravian producers is significantly worse. In Bohemia, most (71%) are at least aware of the campaign, although in 80% of cases no increase in sales occurred. For Moravian producers, the exact opposite applies. Only 39% of producers knew of any Ministry of Agriculture campaigns. Although some producers were aware of campaigns (almost 75% of those from Bohemia, almost 40% of those from Moravia), in most cases sales did not increase because of these events organised by the Ministry. Three producers from Bohemia and two from Moravia saw a slight increase.

### **13.6. Discussion and Conclusion**

Experts for quality labels and food producers agree that the number of food quality labels is too high and confusing to the consumers. The question is whether quality labels can provide some benefits to food producers if consumers are unfamiliar with them. In our research, a sample of 208 Czech food producers with the Regional Food label certification was interviewed. The study was aimed at analysing their attitudes to this label and their experiences with using the Regional Food label, and identification of benefits arising from the label.

Producers were asked what government support they would appreciate to help them become more visible and support their businesses. It is clear from the survey that they see the greatest shortcomings in the level of awareness of local foods with the Regional Food label amongst the public. They think visibility could be effectively increased through advertising in the media at

a nationwide level, not just a regional level, and they would also welcome greater engagement from Regional Authorities in promoting their products, more frequent events such as Know your Farmer, and the better promotion of these events. The survey also shows that producers would appreciate more assistance in securing new distribution channels, e.g. greater co-operation with government institutions, schools, hospitals, etc., where they can supply their products. They see a further shortcoming in legislation. Producers must redo their labels too frequently because of the alignment of Czech legislation with European legislation. This is costly in terms of money and time. Some producers also perceive constant inspections as ineffective. Clearly, inspections are necessary, but it transpired from the interviews with producers that these inspections are often focused on trivial matters.

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## **14. Příloha 6 – Attitudes of Czech Consumers towards Food Quality Labels<sup>4</sup>**

**Abstract:** The article presents basic findings of research on consumer behaviour on the market of foodstuffs assigned by quality labels in the Czech Republic. The sample of the research was 444 respondents interviewed in 2016 in front of retail stores. Goals of the article were to identify important factors which influence customers' decision making process of purchase of food products and how is the order of factors influencing consumers' decisions when they are buying foodstuffs and to discover what is the brand awareness of food quality brands by Czech customers. Based on the research, the most important factors for the customer are price, origin and a quality of the product. Quality label was at the 7th position.

**Keywords:** food quality labels, consumer behaviour, consumers' opinion

**JEL Classification codes:** M31, Q18, P36

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<sup>4</sup> Attitudes of Czech Consumers towards Food Quality Labels. Journal of International Consumer Studies. V recenzním řízení.

### **14.1. Introduction**

After lifting food quality standards in 1993, quality of numerous products has decreased without attention on the side of the consumers. Gradually, information began appearing that it is necessary to monitor composition of products as they might not contain the ingredients they should. The problem was and remains that in the process of shopping consumers do not want to spend time reading unclear and often confusing information on composition of the products which is usually even missing at over-the-counter sale. Therefore, it is common that consumers purchase spurious products where name and packaging play the key role, not the actual composition or nutritional value.

Over time, price has become guidance for quality of food products. But nowadays even that is no guarantee for quality or content of the ingredients expected by the consumers. On the one hand, some product quality indicators are improving, on the other hand, use of substitutes in foodstuffs is growing. Quality labels, the number of which is growing rapidly on the market, are supposed to resolve the issue. These labels should guarantee quality of products in terms of composition, place, or method of production, and should help consumers choose fine quality, unadulterated food.

Due to fact that quality is gradually becoming a significant factor in the choice of food by more and more consumers, quality labels are gaining importance as well. They are substantial not only for consumers but also manufacturers who are able to attract attention or differentiate from the competition thanks to products which meet the parameters for obtaining such label of quality.

### **14.2. Literature review**

When shopping for food, consumers face multiple products differentiated by various attributes and claims communicated by health and quality labels, organic and fair-trade logos, as well as natural, animal welfare and many other labels (e.g., Grunert & Wills, 2007; Sirieix et al., 2013). Quality labels, or the so-called utility signs, are graphic symbols that appear on a product, its packaging, or enclosed information materials. They inform about parameters of a product (packaging), or its use (Velčovská, 2005). They are also concerned to maintain the diversity of the agricultural production in the Union. This generates a demand for agricultural products or foodstuffs with identifiable specific characteristics, those linked to their geographical origin. (European Parliament and Council of the European Union, 2012). Teuber (2011) highlights a



growing consumer segment that is concerned about food safety and food quality issues and values the origin as a useful quality cue. Definition of quality can therefore differ depending upon the importance and relative contribution of each parameter to a producer or consumer-based approach to quality (Bremner, 2000). Any aspect can play a single, but important role in the whole collection of food quality parameters (O’Riordan & Delahunty, 2003). A useful tool for cheese manufacturers willing to manage a significant higher quality of their products could be a product certification through the quality labels. Quality labels can help to producers communicate their products with the value-adding characteristics, highlight the specific character of their products, and stimulate consumers’ interest in such products (Velčovská & Sadílek, 2014).

Studies on consumers' understanding and use of packaged product labeling show an increasing interest for nutrition information, while at the same time disclosing a wide range in comprehension levels (Prieto-Castillo et al., 2015). However, having more labels available to characterize food products does not necessarily add value for consumers, but may increase scepticism (Sirieix et al., 2013). Consumers often ignore such labels due to a lack of trust, knowledge or awareness (Grunert, 2002; Grunert & Wills, 2007; Tootelian & Ross, 2000).

They are a tool to reassure consumers about the quality through certification. Specific labels only cover certain aspects of quality. It means that the market offers product or service quality labels.

According to Tulder (2006) there is great diversity within quality labels. Symbols are divided into several categories which may overlap with one another. Those are related to:

- Industry (sector) – e.g. HORECA Select,
- Working conditions – e.g. Fairtrade, Oké bananas,
- Production conditions – e.g. FSC certification, Rainforest Alliance,
- Recycling and organic products – e.g. Eco-O.K.,
- HR policies – e.g. Investor in People,
- Product – e.g. Klasa.

All utility signs are segmented in higher detail by Velčovská (2005) according to the following criteria: in terms of severity, content, extent, and geographic perspective.



There is no doubt that quality labels have undeniable importance for producers as well as consumers. To consumers they provide certain assurance as products marked by such labels must meet the established standards and requirements. They also contribute to simpler










orientation on the market and help choose a quality product or service with minimal risk. Currently, one of the assumptions about today's consumer behaviour is the fact that people are increasingly buying products not because of their parameters but for the personal value they represent. Products are often evaluated according to their specific qualities (not the main benefit it should deliver), but the so called enhanced product (a set of intangible elements which bring the perceived advantage to the consumer, e.g. image, service, consulting, etc.). Quality labels are part of the enhanced product which influences consumer behaviour, (Turčínková, 2007; Klánová, 2013)

Contribution of brands for manufacturers is often far greater than benefits for consumers. Quality labels can serve as an effective marketing tool which leads to an increase in sales (after being marked with a brand logo) and raise in awareness among consumers. Brands are therefore considered an important tool for manufacturer's sales support. The survey conducted by Focus Agency for an expert periodical Marketing Journal shows that 81% of companies see the main benefits of using quality labels in the expected increase in consumer confidence. Another benefit is the increase in revenues and a way to differentiate from competition. Also, 39% of companies perceive quality labels as a guarantee of production stability and high quality of its products (Focus Agency, 2013; Horáček, 2014)

Czech food market is flooded by many quality labels which should function as a guide for consumers and at the same time guarantee quality and origin of products. Consumers may encounter labels used exclusively for food products (e. g. Klasa or Regionální potravina), or labels given in other product categories (eg. CZECH MADE or Český výrobek). These quality labels are presented in Table 1.

**Table 1 Quality labels used in the Czech Republic**

Logo	Name	Characteristics
	KLASA	Label awarded by the Ministry of Agriculture to food and agricultural products of finest quality.
	Český výrobek – guaranteed by Federation of the Food & Drink Industries of the Czech Republic	Products must be manufactured in the Czech Republic and must contain a certain share of Czech ingredients. The label is awarded by Federation of the Food & Drink Industries of the Czech Republic.

Logo	Name	Characteristics
	Český výrobek (belongs to the Český výrobek fund)	Label for both food and non-food products whose production company is owned by Czech citizens and revenue is not transferred outside the country. Label is awarded by Český výrobek fund.
	Český výrobek (belongs to Český výrobek Ltd.)	Designation of safe products manufactured in the Czech Republic (where employees are Czech). The label is granted by Český výrobek Ltd.
	Czech made	The label which is part of the state program Česká kvalita reflects that the quality of designated goods and services has been objectively verified by a third party. This label is awarded by Sdružení pro Cenu České republiky za jakost.
	BIO – a product of eco agriculture	Nationwide trademark for organic food given awarded by organizations entrusted by the Ministry of Agriculture.
	BIO in EU	EU logo for organic packaged foods, which was introduced by the European Commission.
	Ekologicky šetrný výrobek (Eco-friendly product)	Goods and services that are proven environmentally and consumer health friendly, label is granted by the Ministry of the Environment.
	Regionální potravina (Reginal food)	Label awarded by the Ministry of Agriculture to finest-quality agricultural products that win in regional competitions.
	Asociace regionálních značek (Association of regional labels)	Association of various regional food labels. Regional origin, ecological sustainability, uniqueness.
	Vím, co jím (I know what I eat)	Designation of nutritionally balanced food granted by the non-profit organization Vím, co jím a piju.

Logo	Name	Characteristics
	Zdravá potravina (Healthy food)	Labelled food must not contain controversial additives, artificial flavourings and E-additives, is awarded by Zdravá potravina.
	Certified e-friendly food (CEFF)	Food products without preservatives, artificial colourings and flavours, the label is awarded by an independent institution.
	Chráněné zeměpisné označení (Protected geographic trademark)	Designation of an exceptional agricultural product or foodstuff from a given region / location. At least one phase of production - production, processing, or preparation must take place in the designated area. Awarded by the European Commission.
	Chráněné označení původu (Protected origin trademark)	Designation of an exceptional agricultural product or foodstuff from a given region / location. All stages of production must take place in the designated area, it also applies to ingredients. Awarded by the European Commission.
	Zaručená tradiční specialita (Guaranteed traditional specialty)	Agricultural product or foodstuff produced or manufactured for at least 30 years specific nature of which is recognized by the EU. Awarded by the European Commission.
	Fair Trade	A certification system for products from the countries of the Third World where consumer buying this product helps disadvantaged producers (mainly from the Third World countries). Managed by Fairtrade Labelling Organisation International.

Source: Babička (2012), Eagri (2015)

### 14.3. Methodology

This paper aims to (1) identify the main factors in decision-making while purchasing food and their order stated by the respondents, (2) discover knowledge and recognition of quality labels that appear on the Czech food market, and (3) gain respondents' opinions on food products

marked by quality labels including presentation of a specific examples of Czech food quality labels.

The research was done in the period from December 2015 to January 2016, 444 respondents were interviewed. This roughly corresponds with the distribution of the monitored categories of the population sample. The survey sample consisted of residents of the Czech Republic over 18 years of age addressed in front of grocery stores. The interviews were recorded for qualitative evaluation.

The research technique used was individual semi-structured interviews, the respondents answered a set of 13 questions with closed and open-ended questions and scales. Representative technique was used for the selection of respondents, namely simple random selection where respondents were interviewed in front of grocery stores. The questions were focused on the attitude of respondents towards purchasing food labelled by quality labels and their knowledge of quality labels placed on food sold in the Czech Republic. Further, questionnaire contains identification questions on household size, total net income of the respondent's household, the highest educational attainment of the respondent, and zip code for region identification. The aim of the survey was to get most of responses from women, because we expect they have higher influence on consumer behaviour when shopping for food and stronger decision-making power than men. The respondents were willing to answer questions, and no significant number of respondents who would be reluctant to participate in the questioning was registered. The obtained data were then processed and classification of the first and second degree was conducted, followed by correlation analysis and hypotheses testing.

#### **14.4. Results**

Responses were distributed evenly within the sample according to the number of members in the households, as well as in the category of total monthly net income of the households. In the category of gender, a higher proportion of women was reached, which is advantageous as in most families, women make decisions about food purchases. Unequal representation was achieved in the category of age where almost over 41% of respondents fall into the age group of 20–29 years. The territorial distribution of the respondents is that nearly 64% of respondents come from the Central Bohemian Region, the rest of the respondents from the regions of Olomouc and Plzen (a very slightly). Thus, it is possible to say that the inquirers managed to ensure representation of respondents living in large cities and near such cities who usually have different lifestyle and therefore distinct shopping behaviour from people living in rural areas.

**Table 2 Sample characteristics (n = 444, in %)**

<b>Number of household members</b>	1	8.3	<b>Total monthly net income of households (CZK)</b>	up to 10,000	16.7
	2	22.3		10,001–20,000	19.4
	3	22.2		20,001–30,000	27.8
	4	22.2		30,001–40,000	13.9
	5	25.0		40,001–60,000	11.1
<b>Education</b>			<b>Age (years)</b>	over 60 000	11.1
	Primary	11.1		20–29	41.7
	Secondary	16.7		30–39	19.5
	Secondary (higher)	44.4		40–49	19.4
	College	2.8		50–59	11.1
<b>Gender</b>	University	25.0	<b>Region</b>	60 and more	8.3
	Female	63.9		Central Bohemian	63.8
	Male	36.1		Plzen	2.8
				Olomouc	33.4

In the ranking of the factors that most affect food purchase, an earlier assumption was confirmed that price is the main criterion. Each respondent was asked to state three factors that most influence their purchase of food and, in addition to price, respondents placed great emphasis on the origin of products (whether it is a Czech or foreign product and whether it is a regional product, or a product imported from a greater distance). Among other qualities, appearance of the product was considered important. Other factors that placed on the first to fifth position were quality, composition of the product, taste (which is the most subjective criterion), and recommendation. Quality label placed 7th in case of the first factor, 10th as the second factor, and 3rd in stating the third factor. This means that quality label is not one of the main selection criteria for the respondents.

**Table 3 Order of factors with most influence on food purchase**

	<b>First factor</b>	<b>Second factor</b>	<b>Third factor</b>
1	Price	Price	Price
2	Origin	Origin	Appearance
3	Quality	Composition	Quality label
4	Composition	Appearance	Composition
5	Taste	Other	Recommendation
6	Appearance	Recommendation	Quality
7	Quality label	Habit	Freshness
8	Habit	Freshness	Taste
9	Freshness	Taste	Shelf-life
10	Other	Quality label	Appearance

These tests made on rank correlation (Kendall's tau) did not confirm dependency between the order of the factors cited meaning that it is impossible to say unequivocally which factor respondents generally consider as the most important as there is no trend of a single factor appearing on the first place. Values of Kendall's tau varied from -0.433 to 0.06 and are statistically significant at a significance level of  $\alpha = 0.05$ .

Like in the previous question on factors influencing food purchases, respondents were asked to name three quality labels they knew. This confirmed the earlier assumption that KLASA holds the leading position on the Czech food market as most respondents named it as the first option. Many respondents were not able to name a second label, however, Český produkt, Bio, and the response "Other" appeared among the answers. The respondents also named brands that do not belong among quality labels – e.g. private labels of retail chains. Therefore, it is possible to conclude that the concept of quality labels is unclear for many respondents and, despite repeated campaigns to promote recognition and knowledge of quality labels, consumers are still unsure about what such labels represent in detail. More precisely, shoppers understand that a quality label represents higher quality standard compared to other unmarked goods, but they lack certain knowledge on what production standards, ingredients, or other norms a label stands for or should inform about. As the second option, respondents named Český produkt, Regionální potravina, and Zdravá potravina. It is also interesting that some reported Chráněné zeměpisné označení and Chráněné označení původu as the second and third answer since those labels are not often known among Czech consumers.

**Table 4 Order of labels by awareness**

	<b>First label</b>	<b>Second label</b>	<b>Third label</b>
1	Klasa	Other	Regionální potravina
2	Český produkt	Český výrobek	Other
3	Other	Chráněné zeměpisné označení	Chráněné označení původu
4	Bio	Regionální potravina	Český produkt
5		Český produkt	
6		Zdravá potravina	

Even in this case the conducted rank correlation tests (Kendall's tau) did not confirm any dependency among awareness rankings of quality labels, which means that it is not possible to say unequivocally which labels are more significant than others, except for the Klasa label whose position is exceptional. Values of Kendall's tau vary from -0.501 to 0.229 and are statistically significant at a significance level of  $\alpha = 0.05$ , at the same time there is no visible trend.

Another aim of this paper was to find out opinions of the respondents on food products marked with quality labels. It is noteworthy that 94.4% of respondents rather agree that labelled foodstuffs meet their expectations, but only 58.3% of respondents consider these products better (13.9% absolutely agree and 44.4% rather agree) while 30.6% of respondents were neither concurring nor dissenting. Similarly, the respondents answered questions on whether the labelled products are trustworthy where 61.1% of respondents agree with such statement (19.4% absolutely agree and 41.7% rather agree), which may seem interesting for food producers who endeavour to obtain some of the quality labels. Willingness to pay extra money for the labelled food products was confirmed by 72.2% of the respondents which shows a positive trend that consumers are willing to pay more for products which are marked with quality labels and which are expected to have higher quality than unlabelled products. The limitation of these answers is the self-projection. These findings may also be confirmed by one-sample t-test the value of which reached  $t = 0$  at a significance level of  $\alpha = 0.05$ . Such fact may look slightly paradox as from the test of stating three most influential factors and naming three quality labels it seems that most consumers do not have detailed knowledge on standards represented by each quality label.



**Table 5 Respondents' opinion on labelled food products**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>T-test value</b>
Do food products marked with quality labels meet your expectations?	0	94.4	5.6	0	0	Sig = 0, T = 53.09
In your opinion, are labelled food products of better quality?	1.9	44.4	30.6	2.8	2.8	Sig = 0, T = 15.43
In your opinion, are quality labels trustworthy?	19.4	41.7	22.2	8.3	2.8	Sig = 0, T = 13.36
Are you willing to pay more for labelled than unlabelled products?	27.8	44.4	13.9	5.6	2.8	Sig = 0, T = 12.21

Note: 1 – absolutely agree, 2 – rather agree, 3 – neither agree nor disagree, 4 – rather disagree, 5 – absolutely disagree

#### **14.5. Discussion**

In the study, consumers living with family in the household, with higher educational levels and income, and women showed the greatest information search behaviour for labels, which supports previous findings (Besler et al., 2012; Blitstein & Evans, 2006; Chen et al., 2012; McArthur et al., 2011; Ortega et al., 2011; Satia et al., 2005; Souza et al., 2011).

In identifying three factors that most affect consumers while shopping food, an assumption was confirmed that the most important factor is price. However, the assumption cannot be unequivocally confirmed at this stage of the research. More accurate results will appear with a higher number of respondents and statistically significant correlation. In the opinion of consumers, the second most important factor after price is origin of the food, where in addition respondents care what country a product comes from and, in case it is a domestic product, from which region. The image of regional quality signs among consumers consists of two dimensions: 1) quality guarantee and 2) economic support, which influence purchase intention and willingness to pay for a protected origin product (Van Ittersum et al., 2007).

The third most influential factor according to the gathered information is appearance of products. Visual characteristics therefore play an important role in food selection. It is also necessary to mention other factors which occurred on various positions from first to fifth, those are: quality, composition of the product, taste, and word of mouth or recommendation. Based on all the previously mentioned information it is possible to conclude that quality labels are not one of the key factors in food selection and thus do not have significant influence on consumer behaviour. In a survey of Polish food-processing enterprises, the most important determinants of competitive advantage on the Polish market included taste, price, and quality assurance,

whereas on foreign markets quality assurance was ranked highest, followed by taste and price (Bryła, 2012).

Respondents were also asked to name three labels of quality, most frequently they named Klasa as the first option. Based on the results of this study, Klasa seems to have the highest awareness on the Czech market. Other labels featured on the first place are Český výrobek and Bio. In addition, respondents also named brands which are not considered quality labels but private labels of retail chains. Several respondents were unable to name any brand of quality. These facts reveal that brand awareness of quality labels in the Czech Republic is generally not high. Such labelling thus has low significance and consumers do not have an entirely clear and accurate idea of what quality labels mean. They have a general idea that labelled products should have higher quality, but mostly do not have knowledge on what exactly each label represents in terms of production standards, norms, origin or ingredient requirements. One of the reasons for this could be that there are too many quality labels on the Czech food market, which can cause confusion in consumers' perception of food quality labels and Czech consumers can confuse food quality labels with private labels or other brands. Another reason can be the influence of price on consumers' decision making as for many shoppers in the Czech Republic, price is the most important criterion in the process of purchasing food. This confirms Fotopoulos and Krystallis, when strength of the sign is expressed in consumer willingness to pay a higher price (Fotopoulos & Krystallis, 2003).

The final part of the study examined consumers' views on food products marked with quality labels. Nearly 95% of the respondents rather agree that labelled foodstuffs meet their expectations, while only 58% of consumers consider labelled products to have higher quality in comparison with conventional products. Brand trust is positively associated with consumer confidence in brand quality and safety, largely via trust in the food system (Bryła, 2017). Furthermore, confidence in credence attributes leads to brand loyalty (Lassoued & Hobbs, 2015). As for the question whether quality labels are trustworthy, 61% of those surveyed responded approvingly, while 19% absolutely agree and 42% rather agree with this statement. At the same time, 72% of the respondents are willing to pay more for the labelled food products than for those unlabelled, simply because they view labelled foodstuffs as products with higher quality or some exceptional value, or in case of Bio label they can expect products to be healthier. In conclusion, approximately two thirds of consumers trust quality labels and almost three quarters are willing to pay extra money for such labelled products. This is consistent with previous studies, where brand was also sometimes used as a cue of quality in Western European countries (Grunert, 2005; Joubert & Poalses, 2012). However, as a matter of fact but somewhat

paradoxically, the awareness of these labels and knowledge about their meaning is not high. Therefore, the question remains whether and what actual value labels of quality have on the food market in the Czech Republic. This confirms also studies by Aprile et al. (2012), Festila et al. (2014), Loureiro & McCluskey (2003), Rousseau & Vranken (2013), that labels are an effective tool for improving the signal of quality.

#### **14.6. Conclusion**

The credibility of quality signs depends on the credibility of institutions that award them. To be credible, a quality sign should originate from an external body, not related to the manufacturer and reseller and not having an interest in the sales of a product with such a sign. Quality signs reduce information asymmetry between the buyer and the seller (Bryła, 2017).

Our results should be interpreted in the context of the limitations of the study. First, the study is based on self-reported data, so participants tend to overestimate their understanding and use of labelling. This limitation has a potentially significant impact on the generalizability of the findings and thus, the impact of this study to better understand the Czech consumer behaviour to food labels. Another limitation is the questionable representativeness of the sample, because respondents in front of supermarkets were interviewed only, instead of small grocery stores. In the future, the study could be repeated with a bigger sample of respondents and better structure of certain demographic categories. Information from the research can be applied in decision making about the effectiveness of campaigns for the support of food quality labels on the governmental level and for further planning in food quality.

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## 15. Příloha 7 – Consumer Preferences regarding Food Quality Labels: The Case of Czechia <sup>5</sup>

### Abstract

**Purpose** The purpose of this paper is to identify consumer segments based on the preference of food quality labels in the Czech Republic.

**Design/methodology/approach** Using cluster analysis, segmentation of Czech consumers based on their attitudes to food quality labels were investigated. The consumer segments were profiled using individual consumer characteristics (knowledge of quality labels, perception of quality labels, willingness to pay more for products assigned by food quality labels and socio-demographics characteristics).

**Findings** There are three segments of Czech consumers, called Quality seekers, Unconscious and Impulsive shoppers. Consumers from these clusters have different attitudes and perception of food quality labels. The most frequent segment is Unconscious (almost 50% of Czech population), then Quality seekers and Impulsive shoppers (both 25%).

**Research limitations/implications** The study demonstrates that consumers are driven by different factors when they are buying foodstuffs. Food quality labels are favorably perceived factor of choice.

**Originality/value** This study presents some important differences between developed segments and presents how important are factors of choice for foodstuffs. Another finding is that segmentation of Czech consumers based on their perception of food quality labels is better than by socio-demographic characteristics.

**Keywords:** food quality labels, consumer preferences, segmentation, Czech Republic

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### **15.1. Introduction**

During the past two hundred years, major changes have taken place in food production practices. Because of mass food production accompanied by growing urbanization and settlement, regular face-to-face contact between buyers and sellers has declined (Coff et al., 2008). These trends have resulted in changes in consumers' food purchase decision patterns and information search patterns (Case, 2002; Kristensen et al., 2013). Consumers read labels to obtain information about a product (what it contains, how it was manufactured, etc.) and to maximize the benefits of the food. Consumers also read labels to compare different quality labels or when purchasing new products and expecting reinforcement of previously learned information. Due to food safety scandals and the increasing popularity of health-conscious diets and environmentally conscious consumption patterns, consumers orient themselves to make more informed decisions and healthy food choices by reading the information content on product packaging (e.g. nutrition labels, environmental labels, warning labels, health claims and so forth. (Juhl and Poulsen, 2000; Baltas, 2001; Cheftel, 2005; Van Trijp and Van der Lans, 2007; Grunert et al., 2010; Hall and Osses, 2013; Beruchashvili et al., 2014).

Food quality is a multidimensional concept, and consumers associate it to attributes like food safety, nutrition, organic production, fair trade, free range, animal welfare, origin, and locally grown (Caswell and Siny, 2007; Tempesta and Vecchiato, 2013).

However, it is not clear what consumers intend with food quality, and how the importance given to the concept varies between different segments of the population. In general, experts agree that quality has an objective and a subjective dimension (Grunert, 2005). From an objective point of view, food quality is assured if compulsory production requirements are respected by farmers, manufacturers, and distributors. Engineers and food technologists are for example responsible for the guarantee of objective food quality. Manufacturers around the world are usually required to adopt standardized quality management systems, such as the ISO 22000 for food safety and quality. These standards are developed by the International Organization for Standardization to help reduce food hazards along the food chain. Each country must also organize the production respecting requirements issued by their country legislation. Food safety and quality are often used interchangeably when considering the objective attributes of a product (Röhr et al., 2005). From the consumer perspective, quality perception is often based on subjective evaluations rather than objective information, such as product origin, taste, and appearance (Brunsø et al., 2002). In most cases, consumers are unable to evaluate the objective dimension of quality for purchase. The subjective dimension of quality includes search,



experience, and credence attributes. Search characteristics can be ascertained for purchasing, as the amount of visible fat of a steak or the colour of an apple. Experience attributes are experienced after the first purchase and, if the consumer is satisfied, they play a key role for future purchases. Search attributes are, for example, the taste or the texture of a product. Credence characteristics are external indicators of quality, as labels or nutritional information on the package. These attributes can rarely be directly verified by consumers but are believed to be true. Because of this asymmetry of information, trust is an essential factor for purchases based on credence attributes (Brunsø et al., 2002; Grunert, 2005; Röhr et al., 2005).

As the results of these studies show, awareness of food quality labels is quite low and consumers do not even perceive the presence of the labels when shopping. It could be understood as a sign of the food labels inflation. With their rising number, it is impossible for the consumers to differentiate them (Chalupová et al., 2016). According to data of TNS Opinion & Social network from 2012 within Special Eurobarometer survey (conducted in the 27 member states of the EU on the sample of 26 593 respondents aged 15 years and over), two-thirds of EU citizens (67% in the Czech Republic and only 48% in Poland) check food purchases to see if they have quality labels that ensure specific characteristics, however only few do this consistently (15% in the Czech Republic, 13% in Poland) (European Commission, 2012). Survey of STEM/MARK agency from October 2015 conducted in the Czech Republic has revealed a low awareness of food quality labels among Czech consumers. When buying food, only 9% of Czechs prefer products with quality labels. The Klasa label with 82% of spontaneous and 87% of aided awareness is the best-known label in the Czech Republic. Spontaneous awareness of other labels is less than 25%. Information deficit is perceived as the main barrier in purchasing certified products (Potravinářská komora, 2015). In Poland, only 7% of consumers prefer products certified with quality labels when buying food. Any food quality label was spontaneously mentioned by Polish respondents, aided awareness is 63% for Quality Tradition, 81% for Try Fine Food and 36% for Our Culinary Heritage – Tastes of Regions (Velčovská, 2017). Overall recognition of individual EU food quality logos is low, only 26% of Czechs and 13% of Poles are aware of the PDO, 25% of Czechs and 15% of Poles have recognized the PGI, and 29% of Czechs and 17% of Poles are aware of the TSG (European Commission, 2016).

In the Czech Republic, consumers are provided with a substantial amount of food quality labels. At the national level, the Klasa label has a dominant position and can be underlined as the main quality programme in the Czech Republic (Chalupová et al., 2016).

Apart from Klasa, Czech consumers can meet more than 40 other labels, covering the product quality, product origin, organic farming or other specific characteristics of a food products, e.g. the Czech Product – guaranteed by Federation of the Food and Drink Industries of the Czech Republic, Regional Food, Fair Food, Healthy Choice, Protected Geographical Indication (PGI), Protected Designation of Origin (PDO), Traditional Speciality Guaranteed (TSG), Organic Farming. From these 40 quality labels, there are 14 food quality labels that are the most frequent. These labels are presented in Table 1.

**Table 1 Quality labels used in the Czech Republic**

<b>Name</b>	<b>Brief characteristics</b>
KLASA	Label awarded by the Ministry of Agriculture to food and agricultural products of finest quality.
Český výrobek – guaranteed by Federation of the Food & Drink Industries of the Czech Republic	Products must be manufactured in the Czech Republic and must contain a certain share of Czech ingredients. The label is awarded by Federation of the Food & Drink Industries of the Czech Republic.
Český výrobek (belongs to the Český výrobek fund)	Label for both food and non-food products whose production company is owned by Czech citizens and revenue is not transferred outside the country. Label is awarded by Český výrobek fund.
Český výrobek (belongs to Český výrobek Ltd.)	Designation of safe products manufactured in the Czech Republic (where employees are Czech). The label is granted by Český výrobek Ltd.
Czech made	The label which is part of the state program Česká kvalita reflects that the quality of designated goods and services has been objectively verified by a third party. This label is awarded by Sdružení pro Cenu České republiky za jakost.
BIO – a product of eco agriculture	Nationwide trademark for organic food given awarded by organizations entrusted by the Ministry of Agriculture.
BIO in EU	EU logo for organic packaged foods, which was introduced by the European Commission.
Ekologicky šetrný výrobek (Eco-friendly product)	Goods and services that are proven environmentally and consumer health friendly, label is granted by the Ministry of the Environment.
Regionální potravina (Regional food)	Label awarded by the Ministry of Agriculture to finest-quality agricultural products that win in regional competitions.
Asociace regionálních značek (Association of regional labels)	Association of various regional food labels. Regional origin, ecological sustainability, uniqueness.

<b>Name</b>	<b>Brief characteristics</b>
Vím, co jím (I know what I eat)	Designation of nutritionally balanced food granted by the non-profit organization Vím, co jím.
Zdravá potravina (Healthy food)	Labelled food must not contain controversial additives, artificial flavourings and E-additives, is awarded by Zdravá potravina.
Certified e-friendly food (CEFF)	Food products without preservatives, artificial colourings and flavours, the label is awarded by an independent institution.
Fair Trade	A certification system for products from the countries of the Third World where consumer buying this product helps disadvantaged producers (mainly from the Third World countries). Managed by Fairtrade Labelling Organisation International.

## **15.2. Methodology**

### **15.2.1. Questionnaire and variables**

The research was done in the period from December 2015 to January 2016, 444 respondents were interviewed distribution whom roughly corresponds the distribution of the monitored categories of the population sample. The survey sample consisted of residents of the Czech Republic over 18 years of age addressed in front of grocery stores. The interviews were recorded for qualitative evaluation.

The research technique used was individual semi-structured interviews, the respondents answered a set of 13 questions with closed and open-ended answers and scales. Representative technique was used for the selection of respondents, namely simple random selection where respondents were interviewed in front of grocery stores. The questions were focused on the attitude of respondents towards purchasing food labelled by quality labels and their knowledge of quality labels placed on food sold in the Czech Republic. Further, questionnaire contains identification questions on household size, total net income of the respondent's household, the highest educational attainment of the respondent, and zip code for region identification. The aim of the survey was to get most of responses from women, because we expect they have higher influence on shopping behaviour of food and stronger decision-making power than men.

**Table 2 Sample characteristics (n = 444, in per cent)**

<b>Number of household members</b>	1	8.3	<b>Total monthly net income of households (CZK)</b>	up to 10,000	16.7
	2	22.3		10,001–20,000	19.4
	3	22.2		20,001–30,000	27.8
	4	22.2		30,001–40,000	13.9
	5	25.0		40,001–60,000	11.1
<b>Education</b>			<b>Age (years)</b>	over 60,00	11.1
	Primary	11.1		20–29	41.7
	Secondary	16.7		30–39	19.5
	Secondary (higher)	44.4		40–49	19.4
	College	2.8		50–59	11.1
<b>Gender</b>	University	25.0	<b>Region</b>	60 and more	8.3
	Female	63.9		Central Bohemian	63.8
	Male	36.1		Plzen	2.8
				Olomouc	33.4

### 15.2.2. Data analysis

Data analysis was performed in two steps. First, descriptive statistics such as data sorting, correlation analysis, t-test and chi-square were used to determine significant rank differences in the perception of quality labels. Second, cluster analysis, Hierarchical Cluster Analysis and Ward methods, were used for defining a segment of consumers. SPSS 24.0 software was used for clustering and all data testing.

### 15.2.3. Results

In the ranking of the factors that most affect food purchase, an earlier assumption was confirmed that price is the main criterion. Each respondent was asked to state three factors that most influence their purchase of food and, in addition to price, respondents placed great emphasis on the origin of products (whether it is a Czech or foreign product and whether it is a regional product, or a product imported from a greater distance). Among other qualities, appearance of the product was considered important. Other factors that placed on the first to fifth position were quality, composition of the product, taste (which is the most subjective criterion), and recommendation. Quality label placed 7th in case of the first factor, 10th as the second factor,

and 3rd in stating the third factor. This means that quality label is not one of the main selection criteria for the respondents.

Then, a cluster analysis was used for definition of three clusters based on the respondents' statements. There are four statements with a scale from 1 (totally disagree) to 5 (totally agree).

**S1: Food products assigned by quality labels meets my expectations.**

**S2: Food products assigned by quality labels has better quality.**

**S3: Food quality labels are trusted.**

**S4: I am willing to pay for foods marked with quality labels more than unmarked foods.**

In the first step, a correlation matrix presenting level of reciprocal relations between variables. Due to character of input data Spearman correlation coefficient were used, because this correlation coefficient is non-parametric and does not need a normality of data. Outputs of the correlation matrix were tested at  $\text{sig} = 0.05$ . The goal of the correlation analysis was to identify how strong is the correlation coefficient between variables. According to cluster analysis requirements, independent variables should not be highly correlated with each other, as a requirement for the absence of multicollinearity. After examining the bivariate correlations, it can be stated that the correlations are not too high.

**Table 3 Correlations between statements**

	S1	S2	S3	S4
S1 - Food products assigned by quality labels meets my expectations.	1			
S2 - Food products assigned by quality labels has better quality.	.5499 *			
S3 - Food quality labels are trusted.	.5153 *	.7717 *		
S4 - I am willing to pay for foods marked with quality labels more than unmarked foods.	.4480 *	.5492 *	.5368 *	1

\*  $p = 0.01$

The cluster analysis that followed in the next step included all four statements. Hierarchical Cluster Analysis was then performed using the Ward method and measuring distances using squares of Euclidean distance. Based on differences in the coefficients, it was recommended to create three to four clusters. Given the complexity of interpretation, sample size, coefficient difference, and number of elements in each cluster, using Ward's method, it was decided to create three clusters that are relatively equal in number of elements (one larger and two smaller clusters).

Three clusters that characterize the attitudes of individual types of consumers are now referred to as Quality Seekers, Unconscious and Impulsive Shoppers.

The cluster representation is shown in Table 4, where the largest is a non-quality cluster, with 48.3% of the respondents, followed by two similarly large clusters impulsively shopping with 26.2% of respondents and looking for a quality that includes 25.5% of respondents.

**Table 4 Relative share of clusters**

Cluster	Cluster name	Number of respondents	% of respondents
Cluster 1	Quality seekers	113	25.5
Cluster 2	Unconscious	215	48.3
Cluster 3	Impulsive shoppers	116	26.2

Using the cluster analysis and the Ward method, the ideal number of three clusters was determined based on the number of clusters in the clusters and the differences of the individual clusters based on the Kruskal-Wallis test.

Regarding the attitudes of respondents from individual clusters to quality labels, clusters were named not thinking about quality, impulsively buying and looking for quality. The clusters also differ based on socio-demographic characteristics of education, age, gender, household size and net household income.

**Table 5 Descriptive statistics for individual clusters**

		S1	S2	S3	S4
<b>Quality seekers</b>	Mean	3.84	3.89	3.79	4.09
	N	113	113	113	113
	Std. Dev.	0.56	0.60	0.63	0.28
	Median	4.00	4.00	4.00	4.00
	Min	1	2	2	4
	Max	5	5	5	5
<b>Unconscious</b>	Mean	2.92	2.84	2.78	2.43
	N	215	215	215	215
	Std. Dev.	0.49	0.44	0.53	0.90
	Median	3.00	3.00	3.00	2.00
	Min	2	2	2	1
	Max	4	4	4	4
<b>Impulsive shoppers</b>	Mean	3.76	3.63	3.66	3.13
	N	116	116	116	116
	Std. Dev.	0.49	0.67	0.67	1.12
	Median	4.00	4.00	4.00	3.00
	Min	2	2	2	1
	Max	4	4	4	5

There are 215 respondents in the segment of Unconscious and it is almost half of all respondents (48.3%). Their attitudes to quality labels have statistically significantly lower ( $\text{sig} = 0.00$ ) average values than the quality segments (average values are between 2.43 and 2.92). As with the quality segmented group of consumers, the experience with the product is important for the non-quality segment, but more importantly, the price criterion that was most frequently ranked first. Other important criteria are composition and freshness. The quality label has mostly ranked third. Consumers from the non-quality segment also reported lower spontaneous knowledge of quality labels on the Czech market, where the Klasa quality label is the dominant place. It is also interesting to note that no respondent in this segment knows the European food quality labelling system (Protected Designation of Origin, Protected Geographical Indication and Traditional Specialty Guaranteed). Most women in this segment are women with secondary school education, either living in a single household or in a three to four-person household and most consumers have a net household income of up to 40,000 CZK per month. The age of consumers then copies the age of respondents from the sample.

The segment called Impulsive shoppers has 116 respondents, making up 26.2% of the sample. These are the consumers who consider the price and composition of the product to be the most important criterion. Unlike other segments, impulsively shopping consumers also indicate the current taste or preference at the time of purchase as one of the purchase criteria. Knowledge of food quality marks is higher than in the non-quality segment, and most of all segments of the BIO and Český výrobek labels are mentioned. Consumers expect this segment from quality labels to the fact that the product will be organic and will not contain chemicals. Women are most often educated in this case, since the proportion of secondary and university educated respondents is similar. The segmentation of this cluster by household size does not show large differences, except for five-person households, where it is significantly lower than elsewhere (for single- to four-person households this segment is represented by 25-32.1%). Within this segment, households with a net income of between 30,000 and 40,000 CZK per month are most often represented, most often young consumers aged under 29.

The segment of Impulsive shoppers includes 113 respondents from the sample. The attitudes of respondents from this segment to food quality labels are positive; the average value of responses to the five-step scale is for the four above-mentioned claims of 3.79-4.09. Factors that affect the purchase of food by this segment are the previous positive experience with quality labels, composition and origin of the food. Price as a selection factor appears mostly as a third response

option. These consumers also declared the highest spontaneous knowledge of food quality labels on the Czech market. Consumers' expectations from the quality segmented cluster of quality-labelled food are better composition, origin, taste, freshness, and compliance with food production standards. Compared to the overall structure of the sample, there is a higher number of men, university educated consumers, two- and five-person households with above-average earnings and over 40 years of age in this segment.

### **15.3. Discussion and Conclusion**

The study used data from an original survey designed to investigate how socio-economic variables, previous experience and buying behaviour influences the perception of food quality labels by Czech consumers.

The study findings show that food quality labels are important selection factor for foodstuffs in the Czech Republic. Consumer preferences are not identical for all products and, therefore, studies should analyse preferences for different foodstuffs and not generalised consumer preferences of all foodstuffs.

Restrictions on the research include the selection of a limited number of quality labels that consumers can meet on the Czech food market. Regarding the number of existing brands, it was not possible to include all the current quality labels. Of the large number of brands on the Czech market, one of the research assumptions also shows that the consumer is difficult to orientate in such a large quantity. Considering the extent of the issue, it was also not possible to address in more detail all the factors related to food quality and brands.

Future research will be appropriate to focus on consumer attitudes towards food quality labels and to carry out a larger study to compare consumer attitudes to food quality labels across multiple EU countries. Another option is to examine perceptions of attitudes by individual generations of consumers (Generation X, Generation Y and Generation Z). To clarify consumer typology, it would be useful to extend research into some other socio-demographic characteristics or selected characteristics of buying behaviour.

In the context of a detailed examination, it would be interesting to focus on specific categories of food, to assess the impact of quality labels directly in these categories, and then to compare in which categories the food quality labels are an important guideline in purchasing food.

A specific area of research could be the logos of the food quality labels and the association that trigger these logos. Further exploration could also be focused on marketing communications of



quality labels to identify which media individual consumer segments are tracking and what form of quality label communication would be relevant to them.

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## 16. Příloha 8 – Certification of cheeses and cheese products origin by EU countries<sup>6</sup>

### **Abstract:**

**Purpose:** The purpose of this paper is to analyse the Protected Designation of Origin (PDO), Protected Geographical Indication (PGI) and Traditional Speciality Guaranteed (TSG) utilization on European Union (EU) cheese market.

**Design/methodology/approach:** Secondary data comes from the database of origin and registration. In total, 235 product names registered in the database for cheeses and cheese products were analysed according to type of label and country of origin. To discover a dependence between the variables,  $\chi^2$  test and contingency coefficients were calculated. Hierarchical clustering method enabled to identify the clusters of countries with similar distribution of products in the database.

**Findings:** More than 80 per cent of cheeses and cheese products are certified with PDO. Leading countries in number of certified products are France and Italy. Considering all product classes in the database, only 6 per cent of all PGIs, 33 per cent of PDOs and 15 per cent of TSGs were awarded for cheeses and cheese products. A middle weak correlation between the number of certified products and the country of origin was confirmed.

**Research limitations/implications:** The number of certified products is continuously increasing, their distribution among countries may change slightly over time. Only cluster analysis and two criteria of comparison were used.

**Practical implications:** To local food producers, the findings provide a deeper insight to the EU cheese market. It could stimulate their effort in products certification.

**Originality/value:** The paper brings findings about PDO/PGI/TSG utilization for cheese products in EU countries. There is not research study carried out from the same perspective.

**Keywords:** European Union, Protected Designation of Origin, Cluster analysis, Cheese and cheese products, Protected Geographical Indication, Traditional Speciality Guaranteed

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<sup>6</sup> Certification of cheeses and cheese products origin by EU countries. British Food Journal. 2015, Vol. 117, No. 7. ISSN 1843–1858. ISSN 0007-070X. DOI: 10.1108/BFJ-10-2014-0350. (Spoluautor Šárka Velčovská)

## **16.1. Introduction**

Over the last decade, there has been an increasing demand for artisan and home-made cheeses and cheese products manufactured using the traditional procedures strictly linked to the territory (Aquilanti et al., 2013; Di Cagno et al., 2007). These products are characterised by unique features that make them worthy of being protected and distinguished from similar products produced on an industrial scale. According to Regulation (EU) No 1151/2012 of the European Parliament and of the Council on quality schemes for agricultural products and foodstuffs, consumers in the Union increasingly demand quality as well as traditional products. They are also concerned to maintain the diversity of the agricultural production in the Union. This generates a demand for agricultural products or foodstuffs with identifiable specific characteristics, those linked to their geographical origin (European parliament and Council of the European Union, 2012). Also Teuber (2011) highlights a growing consumer segment that is concerned about food safety and food quality issues and values the origin as a useful quality cue. This consumer trend has led to an interest in the definition of cheese safety, quality, and typical cheese characteristics (Aquilanti et al., 2013).

The quality of cheese involves many parameters from compositional, functional, nutritional, sensory, and safety aspects to convenience, process and economic factors. Definition of quality can therefore differ depending upon the importance and relative contribution of each parameter to a producer or consumer-based approach to quality (Bremner, 2000). Any aspect can play a single, but important role in the whole collection of food quality parameters (O’Riordan & Delahunty, 2003). A useful tool for cheese manufacturers willing to manage a significant higher quality of their products could be a product certification through the quality labels. Quality labels can help to producers communicate their products with the value-adding characteristics, highlight the specific character of their products, and stimulate consumers’ interest in such products (Velčovská & Sadílek, 2014).

The paper deals with the Protected Designation of Origin (PDO), Protected Geographical Indication (PGI) and Traditional Speciality Guaranteed (TSG) quality schemes on cheeses and cheese products market in European Union (EU) countries. Its aim was to analyse PDO, PGI and TSG labels utilization for cheeses and cheese products by type of label and country of product’s origin and to identify the clusters of countries with similar distribution of cheeses and cheese products that are registered in the Database of Origin and Registration (DOOR) as PDO, PGI and/or TSG. For this purpose, the cluster technique was used.

The results obtained in this study should describe utilization of EU quality schemes for cheeses and cheese products in EU countries and present disparities between countries. Study provides useful outputs for cheese producers. Based on this study, they can decide, if it is important for them to strive for registration their products in the DOOR database and if competitive products are already registered.

In accordance with the topic, the paper is structured as follows. Firstly, a brief specification of PDO, PGI and TSG quality scheme is given. The attention is also devoted to the characteristics of the EU cheese market. The next section contains the research methodology, followed by a presentation and discussion of the results.

## **16.2. PDO, PGI and TSG quality scheme specification**

The EU quality scheme is known as Protected Designation of Origin (PDO), Protected Geographical Indication (PGI) and Traditional Speciality Guaranteed (TSG) and identifies agricultural products and foodstuffs farmed and produced to exacting specifications. This scheme was established since 1992 to allow producers to use the added value of their products, to protect the names of their products, to provide consumers clear information on the product origin or speciality character linked to the region and enable them to make more informed purchases (Verbeke et al., 2012).

PDO (Protected Designation of Origin) indicates agricultural products and foodstuffs which are produced, processed and prepared in a given geographical area using recognised knowhow. PGI (Protected Geographical Indication) covers agricultural products and foodstuffs closely linked to the geographical area in at least one of the stages of production, processing or preparation. For PDO food products, the link with the area is stronger, PGI is a more flexible regulation. TSG (Traditional Speciality Guaranteed) highlights traditional character of a product, either in the composition or means of production. To be “traditional” proven usage on the market during at least 30 years is required (European Commission, 2014a; European Commission, 2014b; EUFIC, 2014).

The EU scheme of PDO, PGI and TSG labels aims to (1) enable producers and other stakeholders to increase the value of their products by encouraging diversity and specificities of products in associations with local environments; (2) give consumers the possibility to choose quality foods with a special character and good taste; (3) allow producers to differentiate their production locally, nationally and also internationally (Ministry of Agriculture and National Institute of Origin and Quality, 2010).

The complete list of product names registered as PDO, PGI and TSG as well as names for which registration has been applied is included in the Database of Origin and Registration (DOOR database). The DOOR database project supports the agricultural product quality policy of EU by providing a modern information technology system for the dissemination of public data about registered PDOs, PGIs and TSGs through Europe (European Commission, 2014c; European Commission 2014d; IDABC, 2014).

### 16.3. The EU cheese market

The EU cheese market is the largest in the world (TheDairySite, 2011). Trends in EU cheese production, consumption, imports and exports are shown in Table 1. EU cheese production and consumption is continuously slightly growing. For 2014, EU cheese production is estimated to expand by 1 per cent to 9,250,000 tons, the EU domestic consumption of cheese is expected to be 8,500,000 tons. Imports of cheese declined from 84,000 tons in 2009 and 2010 to 75,000 tons in following years, for 2014 were expected to stay at the same level. A slight grow was registered only in 2012 (4%). EU exports of cheese have been notable for their growth, rising from 578.000 tons in 2009 to 800.000 tons in 2013. For 2014, total EU cheese exports were predicted to grow by 3% to 825.000 tons (Foreign Agricultural Service/USDA, 2013).

**Table 1 EU cheese production, consumption, imports and exports (1,000 metric tons)**

<b>EU 28</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013 preliminary</b>	<b>2014 forecast</b>
<b>Production</b>	8 739	8 959	8 981	9 142	9 175	9 250
<b>Consumption</b>	8 245	8 367	8 374	8 444	8 450	8 500
<b>Imports</b>	84	84	75	78	75	75
<b>Exports</b>	578	676	682	776	800	825

Source: Own processing based on Foreign Agricultural Service/USDA (2013)

If we look on the production of cheese according to EU countries (Table 2), we can see, that three biggest producers, who produce more than 1 million tons of cheese per year, are Germany, France and Italy, i.e. they have 57% share on total EU production of cheese. States with long tradition in producing of cheese and cheese products such Netherlands or Greece are also in the scale of the first ten states. With respect to the topic of the paper, it would be interesting to find out if countries with the highest production of cheese have also the highest number of cheeses

and cheese products registered in DOOR database as PDO, PGI and TSG. It will be examining in practical part of the paper.

**Table 2 Production of cheese in 2012 by EU countries**

	Country	Production (1,000 t)	Share in EU production (%)		Country	Production (1,000 t)	Share in EU production (%)
1	Germany	2,161.15	23.34	15	Belgium	78.34	0.85
2	France	1,928.98	20.84	16	Hungary	72.61	0.78
3	Italy	1,203.76	13.00	17	Portugal	71.88	0.78
4	Netherlands	764.16	8.25	18	Bulgaria	68.51	0.74
5	Poland	721.49	7.79	19	Romania	67.10	0.72
6	United Kingdom	357.20	3.86	20	Estonia	42.63	0.46
7	Spain	315.71	3.41	21	Slovakia	32.10	0.35
8	Denmark	300.00	3.24	22	Croatia	31.63	0.34
9	Greece	195.00	2.11	23	Latvia	31.33	0.34
10	Austria	159.94	1.73	24	Cyprus	19.43	0.21
11	Lithuania	111.81	1.21	25	Slovenia	17.61	0.19
12	Czech Republic	111.55	1.20	26	Ireland	<i>a)</i>	<i>a)</i>
13	Finland	102.32	1.11	27	Luxembourg	<i>a)</i>	<i>a)</i>
14	Sweden	101.16	1.09	28	Malta	<i>a)</i>	<i>a)</i>
					EU 28 <i>b)</i>	9,257.63	100.00

*Notes: Total EU cheese production is different than in Table 1 (year 2012). The reason is the use of different information sources, also data of total EU production in Table 2 are estimated.*

*Later data are not available.*

*a) Not published, b) Estimated, provisional*

Source: Own processing based on Eurostat (2014)

Cheeses have provided much better export opportunities than any other dairy products as consumer willingness to pay for quality European cheeses has always been high (TheDairySite, 2011). However, the cheese market has changed in recent years due to developments in the EU and to global trends. The next period will be crucial for the global cheese market in terms of high growth rate as emerging countries and other developed markets prefer the natural cheese products for consumption. Cheese has already been promoted as a healthy and high protein

snack and thus, an increasing consumption of natural and processed dairy-based cheese products are driving the global cheese market to become the mainstream market in the coming years (Transparency Market Research, 2014; Advantage Business Media, 2015).

Competition within the EU market is heating up, as the market has become more saturated and the remaining growth will only be captured by players that have more to offer than just volume and price (TheDairySite, 2011). Tradition, creativity and fine craftsmanship continue to drive cheese consumption - consumers increasingly desire artisan cheeses, made in small batches using traditional methods, created in their own geographical regions (Berry, 2013; Packaged Facts, 2014; TheDairySite, 2011).

#### **16.4. Strategy focused on cheeses with a link to the region**

The EU cheese market already offers a diverse range of products and it appears that most options to innovate the product itself have already been exhausted. Therefore, cheese producers need to reconsider their traditional business models and develop new strategies for targeting further growth and profitability, e.g. to incorporate new growth areas, either in new geographic areas or in value-adding services in retail market (TheDairySite, 2011).

Improving the level of added value in the retail market may consist in certification of a product origin and quality using PDO, PGI and TSG labels, recognized by the European Union as worthy of being preserved and distinguished these products from others (Mallia et al., 2005). Strategy focused on cheeses with a link to the regions where they are produced, certified with PDO, PGI or TSG, can be successful. Consumers are willing to pay more to suppliers with some unique offer, e.g. for regionally produced specialty cheeses (TheDairySite, 2011). Moreover, the demand for regional foods and specialties is powered by the growing consumer interest in product attributes such as origin, sustainability, traceability and authenticity (Teuber, 2011).

There are some important factors driving consumers to buy or not to buy their local food products. These factors can be a food quality, costs, lifestyle and motivation to support local economic growth. In terms of food quality, local foods are believed to be a fresh because they are grown near to the consumer and distributed with a shorter transportation distance (Arsil et al., 2014). In the research study of Arsil et al. (2014), the two main consumer motivations were detected: saving the money and health benefits. According to Teuber (2011), the most important factor determining the success of a PDO/PGI product is the perceived higher quality compared with non-protected products.



In Europe, a growing number of labels protect certain food products based on their origin (Cheftel, 2005). In many south European countries, several food products owe their reputation to traditional production techniques used in defined geographical areas (such as PDO or PGI) that make such foods very specific and well differentiated from other ones. This concept covers both natural as well as human factors related to the geographical area (Karoui et al., 2005). Becker (2009) identified several European regional clusters based on the focus in their food quality enhancing policies, which included geographical indications as well as collective quality marks, quality assurance schemes and organic production. Specifically, France, Italy and Spain were classified as countries that are clearly PDO/PGI oriented, in contrast with Belgium, Norway and Poland, which were classified as rather food-quality-assurance scheme oriented, and “catching up with respect to PDO/PGIs” Becker (2009).

In an increasingly competitive food market, the industry of traditional foods in Europe needs to innovate in order to sustain market shares (Jordana, 2000). The dairy industry, including cheese production, is no exception. According to Bishop (2006), “innovation is the key to future growth of the cheese market and will continue to be the focus of future research and technology development”. However, tradition and innovation can be tricky to combine, because consumers tend to reject innovations that affect the authentic character of traditional foods.

### **16.5. Methodology**

Previous research deals with analysis of EU quality scheme in selected countries, analysis of PDO (or PGI, TSG) utilization, customer loyalty and buying intention for PDO products, consumer awareness and perception of labels (generally), etc. There is no comprehensive research study of PDO, PGI and TSG labels devoted to their utilization on cheeses and cheese products market. It was intention for our research study.

The aim of our research was to examine the PDO, PGI and TSG labels utilization on cheeses and cheese products market in European Union countries, to analyse the share of product names registered as PDO, PGI and TSG for cheeses and cheese products on the total number of product names registered in the DOOR database, and to compare the data according to selected criteria – type of label (PDO, PGI, and TSG), country of product’s origin, and the size of cheese production in the country. These criteria were chosen to show which label is the most widely used in total as well as in countries, whether there are differences in the number of product names certified with PDO, PGI and TSG in EU countries and whether there is the correlation

between the number of registered PDOs, PGIs and TSGs and the size of cheese production in the country.

Data were obtained from the DOOR database. Product names in the database are classified into several groups based on the categories of products defined in Annex 1 of the Treaty on the Functioning of the European Union and Annex of the Regulation (EU) No. 1151/2012. There is defined 23 product classes for PDOs and PGIs and 17 classes for TSGs. In the DOOR database, cheeses and cheese products (including processed cheeses, cream cheeses, ricotta and other types of cheese) are registered in two separate classes, namely class 1.3 and class 1.4. Class 1.3 “Cheeses” includes cheeses only, while cheese products are registered (together with eggs, honey and other animal products) in class 1.4 “Other products of animal origin”. We worked with both mentioned product classes to have a complex sample of all cheeses and cheese products.

First, descriptive statistics and contingency tables were calculated, second, cluster analysis, Hierarchical Cluster Analysis and Ward methods, were used for defining a segment of consumers. SPSS 24.0 software was used for clustering and all data testing.

On 18th May 2014, 1227 products in total were registered in the DOOR database, and only 235 of them are cheeses and cheese products (221 product names were registered in product class 1.3 Cheeses and 14 items are cheese products registered in product class 1.4 Other products of animal origin). Sample structure is presented in Table 3.

**Table 3 Sample structure (n = 235; in per cent)**

<b>Type of label</b>	PDO	81.70	France	22.55
			Italy	21.28
			Spain	12.34
	PGI	15.32	Greece	8.94
			Portugal	7.66
			United Kingdom	6.81
	TSG	2.98	Others	20.42

<sup>a)</sup> First 80% of cases.

Source: Own processing based on data from European Commission (2014)

As it is evident from Table 3, products are certified mainly with PDO label (more than 80%). The reason for more widespread utilization of PDO for cheeses and cheese products could be the manufacturer's interest to declare a closer link of the product with its geographic region of production, the PDO qualification may be considered to have brought more benefits. Only less than 3% cheeses and cheese products are TSGs. The barrier in more frequent certification with TSG label may lie in a condition for the granting of the label - 30 years of proven usage of a product on the market is required. (European Commission, 2014a; European Commission, 2014b; European Commission, 2014c).

Leading countries in numbers of certified products are France and Italy, followed by Spain. These three countries have obtained 56% of all PDOs, PGIs and TSGs awarded to cheeses and cheese products in product classes 1.3 Cheeses and 1.4 Other products of animal origin. Other countries (the row "Others" in Table 3) have obtained 20.42% of PDOs, PGIs and TSGs, these countries are mainly Slovakia, Germany, Netherlands, Austria, Poland.

Data were analysed using a series of descriptive statistics, Chi-square tests and contingency coefficients were calculated to confirm or disprove the relations between variables. Hierarchical clustering method was used to find a homogeneous group of countries by set factor, several products registered as PDO, PGI and TSG. Then, a one-step clustering procedure (between-groups linkage hierarchical clustering method) was applied to identify distinctive, homogenous products segments. Other frequent methods are the nearest neighbour method, furthest neighbour method, centroid method, pair-group average method, Ward's method and K-mean method. In terms of the study, the most appropriate proved to be the hierarchical clustering method. This approach can be used for comparison of countries (Vilamová et al., 2012).

## **16.6. Results and discussion**

The first part of analysis is based on the list of EU countries and the list of product names of cheeses and cheese products registered in the DOOR database. The ranking of EU countries according to the number of cheeses and cheese products registered in product classes 1.3 and 1.4 as PDO, PGI and TSG is presented in Table 4. Fields with the largest number of registered product names under given label are highlighted in grey colour.

**Table 4 Frequency of cheeses and cheese products registered as PDO, PGI and TSG according to EU countries (n = 235, in per cent)**

EU country	PDO	PGI	TSG	Total (PDO, PGI, TSG)
France	23.96	19.44	0.00	22.55
Italy	25.00	2.78	14.29	21.28
Spain	13.54	5.56	14.29	12.34
Greece	10.94	0.00	0.00	8.94
Portugal	8.85	2.78	0.00	7.66
United Kingdom	5.73	13.89	0.00	6.81
Slovakia	0.00	16.67	28.57	3.40
Germany	2.08	8.33	0.00	2.98
Netherlands	2.08	5.56	14.29	2.98
Austria	3.13	0.00	0.00	2.55
Poland	1.56	5.56	0.00	2.13
Slovenia	2.08	0.00	0.00	1.70
Czech Republic	0.00	8.33	0.00	1.28
Denmark	0.00	5.56	0.00	0.85
Sweden	0.00	2.78	14.29	0.85
Lithuania	0.00	2.78	14.29	0.85
Belgium	0.52	0.00	0.00	0.43
Ireland	0.52	0.00	0.00	0.43
<b>Total</b>	100.00	100.00	100.00	100.00

Source: Own processing based on data from European Commission (2014)

As it results from Table 4, 18 from 28 EU member countries have registered their cheeses and cheese products as PDO, PGI or TSG in the DOOR database. The highest share have

Mediterranean countries like France, Italy, Spain, Greece and Portugal. Especially France and Italy produce a broad variety of different types of cheeses and cheese products. The first six countries of the ranking (by column Total in Table 4), including mentioned Mediterranean countries and United Kingdom, i.e. 21% of all EU countries have achieved 80% of all registered cheeses and cheese products as PDO, PGI and TSG (interestingly, the Pareto rule is shown here). The first three countries in the ranking (Table 4), France, Italy and Spain, then have more than 55% of all registered product names for cheeses and cheese products.

The reason could be a long culinary history and importance of these countries, which denotes number of regional and traditional specialities famous worldwide. Cheeses like Emmental, Camembert or Roquefort from France, Mozzarella, Gorgonzola or Pecorino from Italy are popular not only in south-western Europe, but they are also important export products purchased by customers all over the world. France is the first in number of PGI labels, Italy has registered the highest number PDOs. An interesting position has Slovakia which is the leader in number of cheeses and cheese products with TSG label and occupies the second position of the ranking in number of cheeses and cheese products under PGI, although in total ranking has 7th position among EU countries.

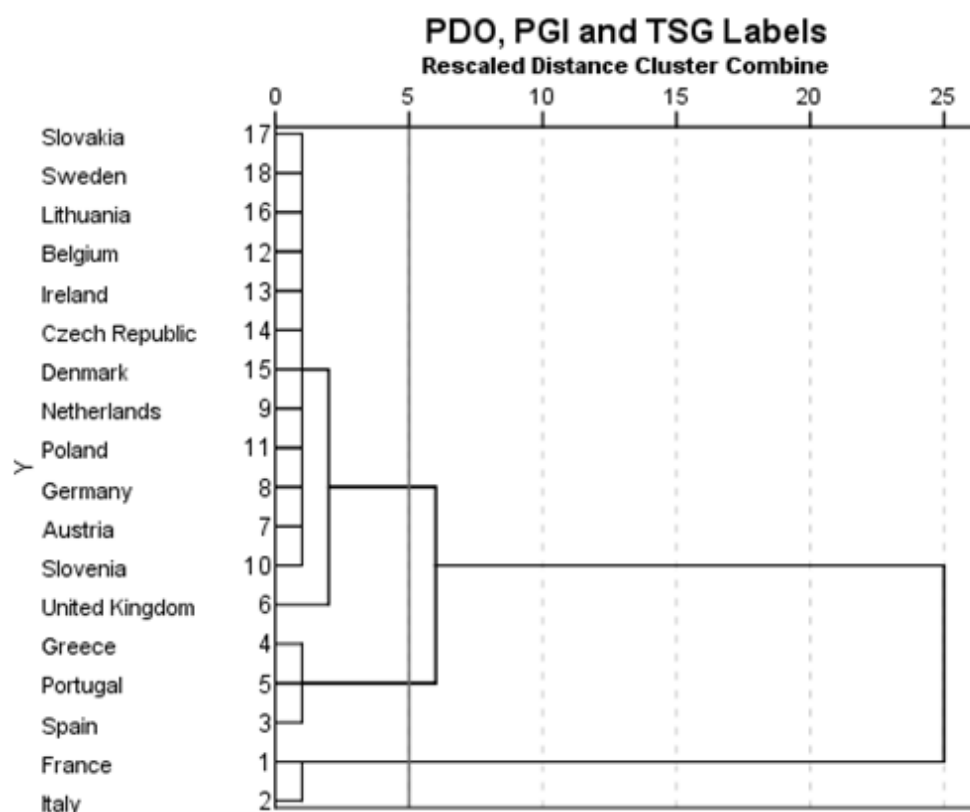
Relations in the sample are verified by chi-square test ( $\chi^2 = 0$ ,  $p < 0.05$ ), Cramer's contingency coefficient (0.723) and Contingency coefficient (0.568), thus there is a middle weak correlation between the number of product names registered in the database for cheeses and cheese products and the country of product's origin. With respect to the topic, it is interesting to find out if the number of registered cheeses and cheese products as PDO, PGI and TSG is depending on production of cheese in the country.

We can suppose that countries with a higher level of production will also have a more products certified with mentioned labels. If we compare data in Table 4 and Table 2, we can see, that our assumption is confirmed for France and Italy. In total, these countries have obtained the highest number of PDO, PGI and TSG labels and they are also the highest producers of cheese in EU (2nd position of France, 3rd position of Italy in EU cheese production). We can say, that Italy has proactive approach to certification of their products. While its share in EU cheese production is 13%, the share in number of PDOs, PGIs and TSGs for cheeses and cheese products reached 21.28%. Some states with significantly lower volume of cheese production have a high share of registered cheese products in the DOOR database as PDO, PGI or TSG. These examples are Spain (7th position in cheese production with 3.41% share in EU, but 3rd position in registered cheese products with 12.34% share in EU), Greece (9th in production with 2.11% share in EU, but 4th in registered products with 8.94% share), Portugal (17th in

production with 0.78% share in EU, but 5th in registered products with 7.66% share) or Slovakia (21st in production with 0.35% share in EU, but 7<sup>th</sup> in registered products with 3.40% share). The reverse situation can be observed for Germany or Netherlands. Germany is the biggest cheese producer in EU (23.34% share in EU), however has received less than 3% of all PDO, PGI and TSG labels in the EU. Netherlands has contributed to EU cheese production by 8.25%, but its share of PDOs, PGIs and TSGs for cheeses and cheese products in EU is only 2.98%.

Based on these findings, the correlation between the number of registered cheeses and cheese products as PDO, PGI and TSG and the volume of cheese production in the country was tested using the chi-square test. There is surprisingly no relation between these variables, sig F = 0.224,  $p < 0.05$ . Similar values of chi-square test were achieved, when we analysed each label separately: sig F = 0.211 for PDO, 0.261 for PGI, and 0.390 for TSG), thus we can confirm no relation between tested variables. However, it is necessary to consider that the sample e. g. for TSG is so small, then we cannot generalize.

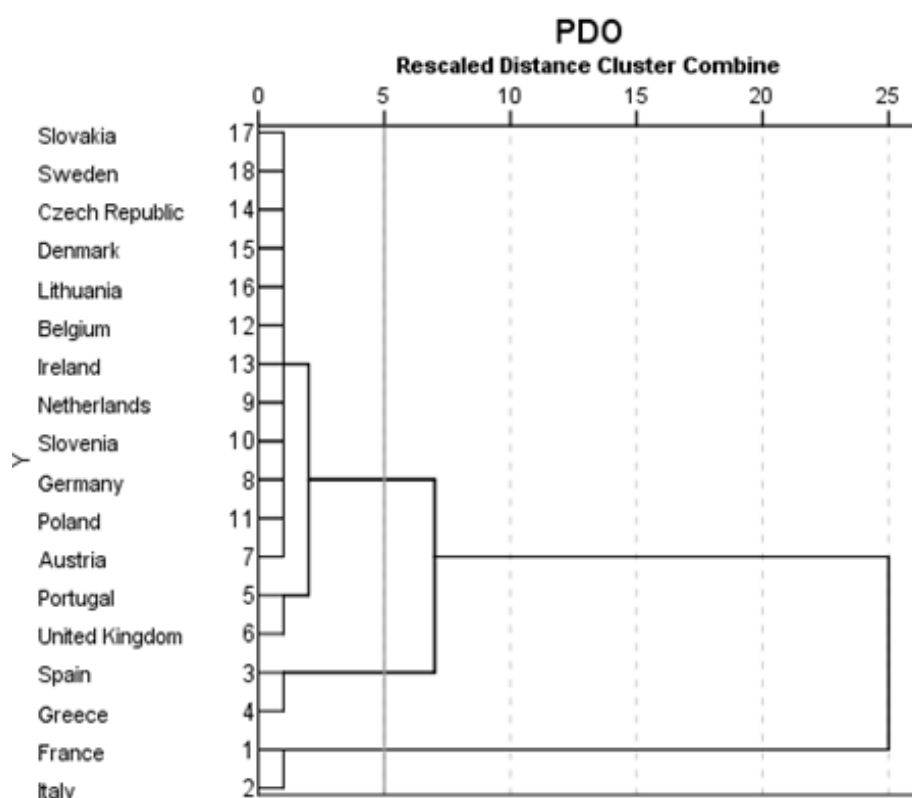
**Figure 1 Clusters of cheeses and cheese products registered as PDO, PGI and TSG according to EU countries (n = 235, in per cent)**



Source: Own processing

Distribution of cheeses and cheese products certified with PDO, PGI and TSG labels by countries is also illustrated using cluster analysis and represented graphically by dendrogram (Figure 1). The first group comprises France and Italy only. These two countries have almost 44% of all registered products in the DOOR database. The second cluster consists of Spain, Greece and Portugal, whose share on total amount is 29%. The third cluster (the rest of countries) has share 27% of all products and these states do not play such important role as the first two clusters. Based on cheese's characteristics, typical product for the first segment are ripened cheeses.

**Figure 2 Clusters of cheeses and cheese products registered as PDO according to EU countries (n = 192, in per cent)**

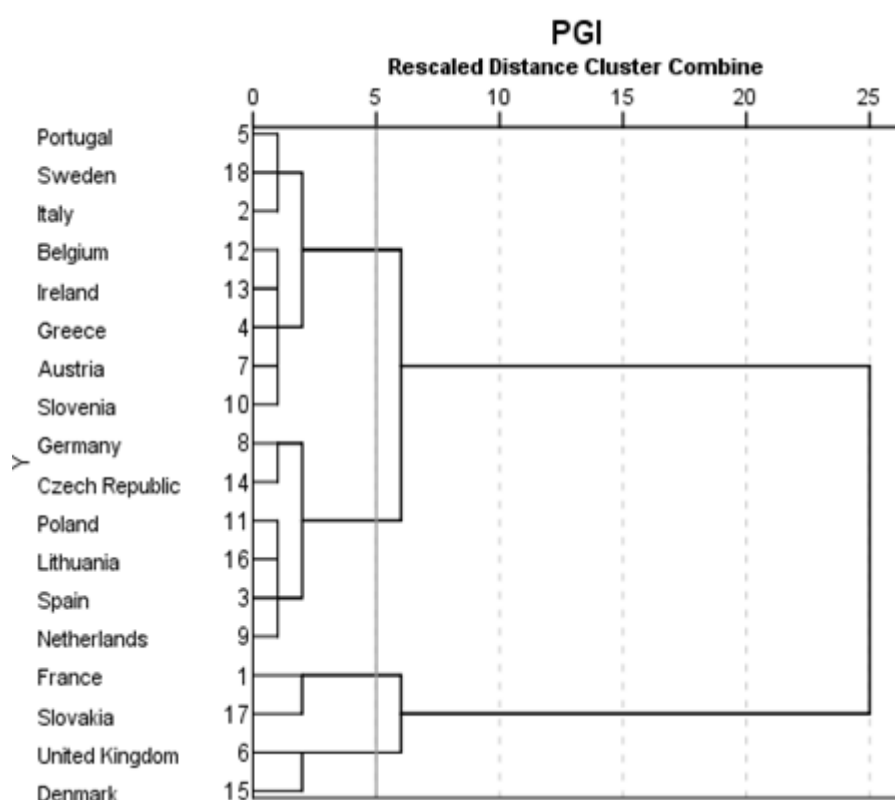


Source: Own processing

The dendrogram of products registered as PDO (Figure 2) looks very similar to the dendrogram of PDO, PGI and TSG together. Explanation is very clear – products registered as PDO has the highest share of total number of all registered products. Also, most of products registered as PDO belong to Mediterranean countries like Italy and France, which constitutes the first and the biggest cluster. This cluster includes 49% of all products. The second cluster consists of

Greece and Spain and its share on total sample is 24%. The third segment is a group of rest 14 countries with share of 27%. It is quite interesting that the third segment has significantly lower number of registered products, and that is why it is homogeneous segment, but registered products as individual cases are heterogeneous and consist of various types of cheeses and cheese products.

**Figure 3 Clusters of cheeses and cheese products registered as PGI according to EU countries (n = 36, in per cent)**



Source: Own processing

Clusters of countries by PGI labels (Figure 3) differ considerably from clusters for all registered product names or for PDOs. The first cluster consists of Denmark and UK with seven registered products together, i.e. 19% of registered products. More products in PGI has UK: five registered products versus two products of Denmark. Slovakia and France with 36% of PGIs are states put into the second cluster, even though these countries has the highest number of registered products, seven in France and six in Slovakia. Typically, registered products are smoked cheeses made from goat and sheep milk in Slovakia, typical French cheeses are Gruyère or Emmental. Germany, Czech Republic, Poland, Lithuania, Spain and Netherlands are members of the third cluster. These countries have registered 13 products as PGI, which is 36% of total



36 registered items. The number of registered products in this cluster varies from one to three. The fourth, and the last cluster (8% of registered products) varies the most, only three countries have registered one product.

Those are Portugal, Sweden and Italy. Other countries (Belgium, Ireland, Greece, Austria, and Slovenia) have registered no product.

To analyse the share of cheeses and cheese products registered as PDO, PGI and TSG on total number of all products in the DOOR database, the complete list of product names from the DOOR database was used. The results are presented in Table 5.

**Table 5 Share of cheeses and cheese products registered as PDO, PGI and TSG in the DOOR database**

	PDO	PGI	TSG	Total
<b>Number of registered cheeses and cheese products (1.3+1.4) in DOOR database by EU countries</b>	192	36	7	235
<b>Number of all products registered in DOOR database by EU countries</b>	576	605	46	1227
<b>Share of cheeses and cheese products in DOOR database (in %)</b>	33.33	5.95	15.22	19.15

Source: Own processing based on data from European Commission (2014)

In total, there were 1227 product items registered in the DOOR database (on 18th May 2014), the most of them are PGIs, followed with a slight difference by PDOs. When we consider cheeses and cheese products only, the situation is reversed, PDOs with a large majority predominate. Another interesting finding resulted from the analysis of the share of cheeses and cheese products certified with PDO, PGI and TSG on the total number of product names registered under these labels (the last row in Table 5). Only 6% of all PGIs were awarded for cheeses and cheese products, whilst under PDO it was 33%. TSG is the least frequently used label, only 46 items is registered in the DOOR database under this label, and 15% of them are cheeses and cheese products.

**Table 6 Share of cheeses and cheese products registered as PDO, PGI and TSG in the DOOR database according to EU countries (in %)**

<b>Country</b>	<b>Share of PDOs in classes 1.3 and 1.4 on all PDOs in DOOR</b>	<b>Share of PGIs in classes 1.3 and 1.4 on all PGIs in DOOR</b>	<b>Share of TSGs in classes 1.3 and 1.4 on all TSGs in DOOR</b>	<b>Share of PDOs, PGIs and TSGs in classes 1.3 and 1.4 on all PDOs, PGIs and TSGs in DOOR</b>
Italy	30.00	0.98	50.00	<b>18.94</b>
France	50.00	5.88	0.00	<b>25.00</b>
Spain	27.37	2.53	25.00	<b>16.29</b>
Portugal	26.56	1.67	0.00	<b>14.40</b>
Greece	28.38	0.00	<i>a)</i>	<b>20.79</b>
Germany	44.44	4.35	<i>a)</i>	<b>8.97</b>
Un. Kingdom	47.83	15.63	0.00	<b>28.07</b>
Poland	37.50	11.11	0.00	<b>14.29</b>
Czech Republic	0.00	13.04	0.00	<b>9.09</b>
Slovenia	57.14	0.00	0.00	<b>20.00</b>
Belgium	33.33	0.00	0.00	<b>6.67</b>
Slovakia	0.00	85.71	28.57	<b>53.33</b>
Austria	75.00	0.00	<i>a)</i>	<b>42.86</b>
Netherlands	80.00	66.67	50.00	<b>70.00</b>
Denmark	<i>a)</i>	33.33	<i>a)</i>	<b>33.33</b>
Sweden	0.00	33.33	50.00	<b>33.33</b>
Lithuania	0.00	33.33	50.00	<b>33.33</b>
Ireland	100.00	0.00	<i>a)</i>	<b>20.00</b>
Others <sup>b)</sup>	0.00	0.00	0.00	<b>0.00</b>

*a) The country has no products certified with given label in DOOR database.*

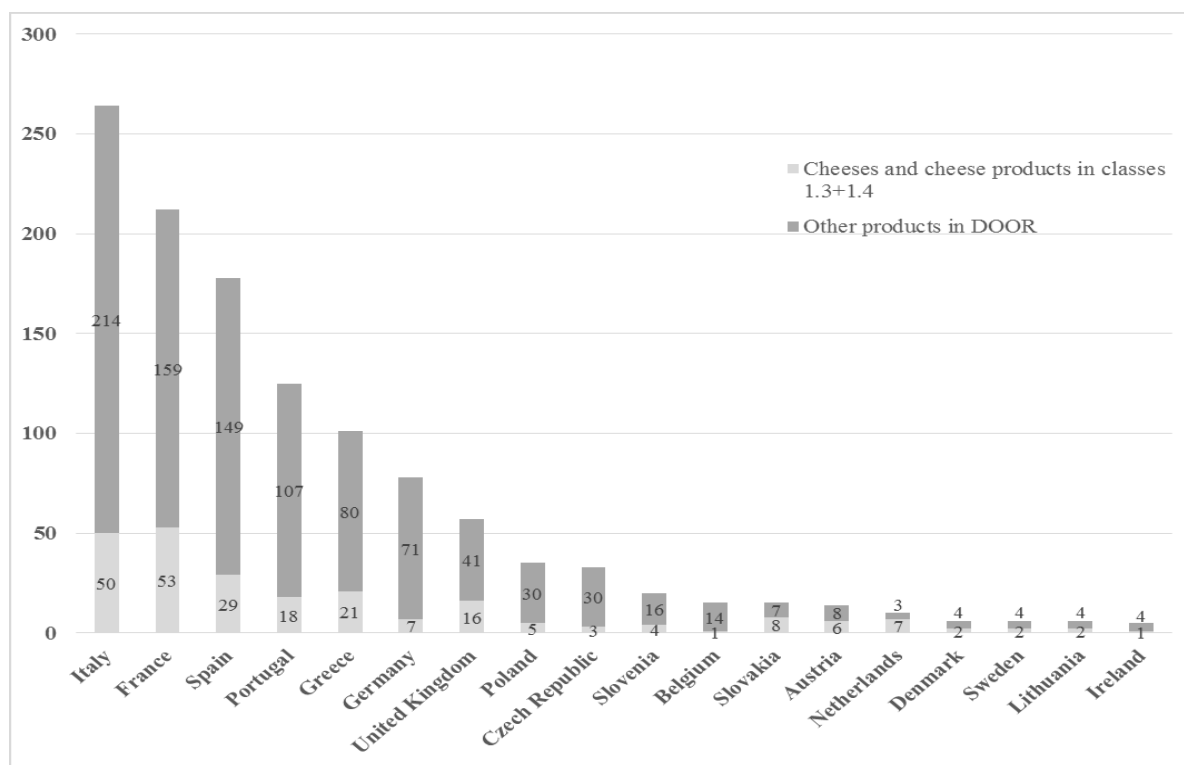
*b) Finland, Hungary, Bulgaria, Romania, Estonia, Croatia, Latvia, Cyprus, Luxembourg, and*

*Malta have not certified cheeses and cheese products as PDO, PGI or TSG in DOOR database.*

Source: Own processing based on data from European Commission (2014)

Table 6 shows the per centage shares of cheeses and cheese products registered by EU countries as PDO, PGI and TSG in the DOOR database (in product classes 1.3 and 1.4) of the total number of product names registered by the country in the database. The dominating countries in number of registered items in the DOOR database, in total as well as for cheeses and cheese products, are Italy, France and Spain (Table 4). Concerning the share of registered cheeses and cheese products on all products registered in the database, the ranking of countries is different. In some countries, the share of registered cheeses and cheese products is curiously high. That applies for countries such Netherlands (70% of all registered products in the database), Slovakia (53%) or Austria (43%). However, these countries have only a very small number of products in the database. When we consider countries with generally high number of registered products in DOOR database (more than 50 certified products), the highest share of cheeses and cheese products have United Kingdom (28% of all their certified products), followed by France (25%), Greece (21%), and Italy (19%). In rest countries, the share of cheeses and cheese products on all registered products is not eminent. These results are also displayed in Figure 4, per centages are replaced by frequencies.

**Figure 4 Share of cheeses and cheese products registered as PDO, PGI and TSG in product classes 1.3 and 1.4 in all products registered in the DOOR database according to EU countries (number of products)**



Source: Own processing based on data from European Commission (2014)

## 16.7. Conclusion

Nowadays, the European Union quality schemes, represented by Protected Designation of Origin, Protected Geographical Indication and Traditional Speciality Guaranteed, play important role for customers who can recognize easily an additional value of a genuine and traditional food product. The PDO, PGI and TSG scheme is seen as useful for conveying information on the product's origin and method of production. It enables customers to reduce the uncertainty and make more informed purchases and the best possible choices of food products. Labels can also facilitate repeat purchases when satisfaction has occurred (Bredahl, 2004; Verbeke, 2005; Verbeke and Ward, 2006).

In presented paper, the attention was given to PDO, PGI and TSG certification of cheeses and cheese products in European Union market. The main contribution of the paper lies in a comprehensive overview on the utilization of the labels by EU countries and comparison of data by country of origin, type of label, and quantity of cheese production in the country.

Clusters of countries with similar characteristics of their registered cheeses and cheese products were identified. Factors set for the process of cluster analysis were obtained from the DOOR database, which consists of limited number of information for each registered product. We choose the number of product names registered as PDO, PGI and TSG in each country. Only one clustering procedure (between-groups linkage hierarchical clustering method) was applied, because its results fit best to research purposes. Other clustering methods cannot provide so appropriate outputs. From the cluster analysis comparing the number of cheeses and cheese products certified by EU countries as PDO, PGI and TSG labels in the DOOR database results that France and Italy have the highest number these products. These countries also belong among the biggest cheese producers in EU. The second cluster includes Spain, Greece and Portugal. The third cluster consists of the rest of EU countries and does not play such important role as the first two clusters. Follow-up analysis showed that there is not the correlation between the number of cheeses and cheese products registered as PDO, PGI and TSG and the size of cheese production in the country. E.g. Germany is the biggest cheese producer in EU, but has received less than 3% of all PDO, PGI and TSG labels, whilst Portugal with fifth highest share of certified products exhibit a low share on EU cheese production.

We can also compare our findings with Becker (2009) who identified several European regional clusters based on the focus in food quality enhancing policies, which included geographical indications, collective quality labels, quality assurance schemes, and organic production. Drawing from the Becker study, France, Italy and Spain were classified as countries that are clearly PDO/PGI oriented, whilst Belgium, Norway and Poland were classified as rather food-quality-assurance scheme oriented, and “catching up with respect to PDO/PGIs” Becker (2009). This is also confirmed by outcomes from our analysis. The results of our study, showing the disparities between countries, can be significant mainly for cheese producers. The information helps in them deepen understanding about the issues related to EU quality scheme utilization, thus providing useful knowledge to support their marketing strategy. Based on the study, they can decide if it is important for them to strive for registration their products in the DOOR database and if competitive products are already registered. There is a wide range of benefits arising from PDO, PGI and TSG certification. From producer’s point of view, these benefits lie in fair competition, protection of product’s name against imitations, promotion of the product, and competitive advantage due to increased consumer attachment to the product. Labels can also help producers obtain a premium price for their authentic products and increase their profit. This statement can be encouraged by contemporary research of impact of cheese brands to their consumption (Spinelli et al., 2015; Foster and McLelland; 2015), especially Pilone et al. (2015)

emphasizes increasing impact of brands, mainly quality labels in consumers' preferences with respect to traditional cheese brands. Consumers are willing to pay more for regionally produced specialty cheeses when they combine good quality and taste. Specialty cheese stores use these cheeses to distinguish their range from the large retailers (TheDairySite, 2011; European parliament and council of the European Union, 2012). There is also benefit related to building or improving the producer's reputation through PDO, PGI and TSG schemes including independent quality certification. Using these labels can bring ability to access new markets or marketing channels.

The European Union quality schemes and promotion of products with a strong geographical connotation has become a strategic factor of the European Union agro-food system. This has led to a significant increase in the number of food products with PDO, PGI and TSG labels. These labels should be an important tool for companies willing to communicate a higher quality or specific characteristics of their original and traditional products, in order to gain a competitive advantage in the market. They should be a significant dimension of marketing strategy for producers, taking into consideration the consumers' interest.

## **16.8. Limitations and future research**

Aside from the theoretical and managerial contribution of the study, there are some limitations. The sample size of product names from DOOR database is related to the date of 18th May 2014, but number of PGI, PDO and TSG labels registered in the DOOR database is continuously increasing, and the distribution of the labels between countries may change slightly. The attention is given only to cheeses and cheese products market, not to other products categories. Further, we used only cluster analysis in the study and the comparison is based only on three selected criteria. There are many other statistical methods for analysing and comparison of the labels' utilization. In the future, the study could be repeated in order to compare the expansion of PGI, PDO and TSG labels and their distribution between countries and/or product categories. It would be also useful to move forward with this study including also other product categories and other countries listed in the DOOR database. We recommend conducting more extensive research using new criteria of comparison or another statistical method. Further comparison can be based e.g. on the status of application (to show the relations between product names applied and registered in the database), the date of product name registration in the database (to monitor the trends in number of certified products), the date of application in comparison with the date of product name registration (to compare the length of the registration process of particular

products). It would be interesting to describe and analyse differences among clusters based on chosen clustering method. Finally, it would be interesting to carry out consumer research with the purpose to identify consumer attitudes to the PDO, PGI and TSG labels and consumer behaviour on the cheese market. It could help to cheeses and cheese products producers in their decision-making about the labels' utilization and their promotion.

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