

PURCHASING DECISION- MAKING FACTORS OF YOUNG ADULT CON- SUMERS: A MULTICOUN- TRY CROSS-CULTURAL PERSPECTIVE*

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Abstract: Young adult consumers (15-30 years old) represent a unique population segment that is believed to be more homogenous across countries and cultures, compared to other population segments. Thus, young adult consumers are thought to hold a "common culture", as being "global citizens". This paper employs Fan & Xiao's (1998) five factor consumer decision-making model and examines the importance of *brands, quality, price, time and information* in a multicountry study of young adult consumers across Slovenia, Turkey, Malaysia and Kazakhstan. The analysis also looks at the issue of universality vs. cultural contingency of these factors, applying both *partial eta square* and *Cohen's d* coefficient tests. The results show that factors *price* and *quality* are significant both between all four countries, as well as only among Muslim countries, giving some support for the contingency perspective.
Keywords: *Young adult consumers, purchasing decision-making factors, culture, effect size measures*

DEJAVNIKI NAKUPNEGA ODLOČANJA MLADIH PORABNIKOV: MEDKULTURNA PRIMERJAVA VEČ DRŽAV

Povzetek: Mladi porabniki (stari od 15 do 30 let) so edinstven segment porabnikov, za katerega velja, da je globalno bolj homogen od drugih segmentov. Tako naj bi bili mladi porabniki nekakšni "globalni državljani," ki jih povezuje "skupna kultura" ne glede na posamezno nacionalno okolje, iz katerega prihajajo. Ta prispevek testira stopnjo univerzalnosti dejavnikov nakupnega odločanja mladih porabnikov iz Slovenije, Turčije, Malezije in Kazahstana ob pomoči modela petih dejavnikov (*blagovna znamka, kakovost, cena, pomen časa in vloga informacij*) avtorjev Fan in Xiao (1998). Stopnjo univerzalnosti pomembnosti omenjenih dejavnikov ocenjujem s t. i. ocenami *velikosti učinkov* (angl. *effect size measures*), pri tem pa uporabljam *delni Eta kvadrat* test in *Cohenov d*

Izvirni znanstveni članek

koeficient. Rezultati primerjav kažejo značilne razlike v pomembnosti dejavnikov *cene* in *ka-kovosti* med posameznimi nacionalnimi vzorci v okviru procesov nakupnega odločanja, s čimer ne moremo potrditi teze o popolni univerzalnosti dejavnikov nakupnega odločanja, niti v okviru primerjave vseh štirih držav (vključno s Slovenijo) niti samo treh muslimanskih držav.

Ključne besede: mladi porabniki, dejavniki nakupnega odločanja, velikosti učinkov, medkulturne razlike

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1. INTRODUCTION

Cultural and cross-cultural research has over the last few decades become “one of the big questions” in international marketing and international business (Buckley & Lessard, 2005). It should also be understood as a “leading theory in international marketing research” (Yaprak, 2008; cf. Nakata, 2003). This is to great extent because culture is today seen more than just a source of market variation, but increasingly as a “pervasive influence which underlines all facts of social behavior and interaction”. Overall, the role and importance of culture in a plethora of managerial and marketing contexts has led to a proliferation of cross-cultural research in international marketing (see Papadopoulos & Heslop, 2003). Culture and cross-cultural research hold profound implications for marketing theory and practice (Craig & Douglas, 2006, p 323). In this context, Clark (1990) and Triandis (1994) also point how cross-cultural research in marketing does not merely “examine the generalizability of marketing theories,” but also “reveals their boundary conditions” (Engelen & Brettel, 2010).

Within the explosion of cross-cultural research, we have also witnessed a fundamental shift of focus from initial country-of-origin studies to a central question of universality and cultural contingency across a plethora of international marketing issues (Yaprak, 2008). As globalization is leading to an increased socio-economic convergence, it is to a degree also resulting in: (a) increasingly standardized marketing strategies across cultural and geographical areas (Zou & Cavusgil, 2002), (b) the emergence of global brands (Aaker & Joachimsthaler, 1999) and (c) catering to globally-driven consumer cultures (Maynard & Tian, 2004). All these changes have led to apocalyptic predictions of the local consumer’s market demise (Levitt, 1983). However, it has instead resulted in a more hybrid form of *marketing* or *marketplace glocalization* (Ritzer, 2003) and the existence of hybrid consumer cultures (Salcedo, 2003). Hence, the globalization of marketing does not necessarily entail uniform consumer patterns or cultures (Douglas & Craig, 1997). In fact, Lemmens, Croux & Dekimpe (2007) argue that globalization has actually led to strong cultural divergence patterns in industrialized countries. To some extent cultural elements seem to be stable over time, while “consumer behavior remains diverse” (Yeniyyurt & Townsend, 2003). This calls for more research on universality and cultural contingency in consumer behavior (Craig & Douglas, 2006), particularly in non-Western cultures and/or smaller national cultures (Grachev & Bobina, 2006).

Young adult consumers (aged 15-30 years old) may be seen as an emerging population group (Arnett, 1999), which has “*economical autonomy and power of making independent decisions*” (Cardoso & Pinto, 2010). These consumers increasingly draw marketing attention (Xie & Singh, 2007), which has resulted in a series of empirical studies directed towards young adult consumer segments (see Cardoso & Pinto, 2010). A widespread academic interest has also been partly drawn on the proposition that young adult consumers may be perceived as “*competent consumers*”, who can make autonomous purchasing and consumer decisions (Grønhoj, 2007). Furthermore, this segment has been seen as one of the new emerging consumer segments in the last two decades (Douglas & Craig, 1997), despite remaining relatively under-researched (Wong, Polonsky & Garma, 2008). Their contribution may be in fact multiple, since they can significantly influence their parents’ or family’s consumption patterns (Zollo, 1995) as well as be the “early adopters” of new market and consumption trends. From a more sociological perspective, the embeddedness of consumer behavior in culture is not only interesting within Zukin & DiMaggio’s (1990) *embeddedness typology*¹, but also due to the interaction between culture and consumerism, as a “*special feature of modernity and therefore a privileged prism for its examination*” (Zelizer, 2005, p 335).

Apart from looking into specifics of young adult consumers and their purchasing patterns, one of the more growing questions in research is the question of their homogeneity across cultures (i.e. Zhou, Teng & Poon, 2008). Cultural universalists, thus, use globalization and the emergence of the ‘global village’ to show a move towards a universal global consumer (Maynard & Tian, 2004). With regards to young adult consumers some have increasingly seen the young adult consumer segment as a segment “*holding a common culture*” (Fabris, 2003) with quite “*unified tastes*” (Gianluigi, 1992), and a segment that is universally “*cosmopolitan*” (Thompson & Tambyah, 1999). Some sociologists have also made similar observation on convergence of young adults as a unified socio-cultural segment. While some empirical evidence supports the universalist perspective (i.e. Hafstrom et al. 1992), others have shown this to be true on a more aggregate cultural level (western vs. non-western cultures) (Liefeld, Wall & Heslop, 1999).

1 In their typology, Zukin & DiMaggio (1990) build on the concept of *economic embeddedness* (Granovetter, 1985) and outline how economic action is embedded in *cognitive, structural, cultural and political* contexts.

The issue of cultural universality vs. cultural contingency can be applied as a tool for testing international and traditional marketing theories (Triandis, 1994), while also advancing marketing science (Steenkamp, 2005). As the marketing field is diverse, Engel & Brettel (2010) point that most studies of culture in the marketing field are comparative, rather than explanatory. Their analysis of 99 articles in 14 leading marketing journals (1990-2008 period) shows that cross-cultural research in marketing is mostly US-dominant (59%), based on a single country sample (65%) and mainly in the consumer-related research area (51%). Within the field itself a look into culture in international marketing or consumer research seems to be still ‘struggling’ with conceptual challenges of *cultural dimensions and typologies* (Magnusson et al., 2008) and less with substantive issues. It is particularly in this context that the issue of the *effect size of culture* may be very useful (Ven de Vijver, 2003) as it puts aside “*dimensions and typologies,*” and looks at the effect size from a strictly statistical and substantive view.

The aim of this paper is to analyze and compare the importance of specific purchasing decision-making factors (for everyday goods) among three non-Western, very diverse Muslim countries (Turkey, Kazakhstan and Malaysia), and Slovenia²; for young adult consumers between 15 and 30 years of age. The goal of the paper is in this regard two-fold. First, it examines the importance of specific purchasing decision-making factors at the individual country level and ties it to their cultural characteristics (mostly *power distance*). Second, it addresses the issue of cultural universality vs. contingency through a concept of the *effect size* of culture, applying *partial eta square* and *Cohen’s d* power analysis tests.

The paper makes several contributions to both, theory and practice. Empirically it contributes to a narrowing of the gap for multi-country, non-Western culture studies, as well as to growing research on young adult consumers. From a methodological perspective the paper tests the ‘quality’ and applicability of Fan & Xiao’s (1998) survey instrument for purchasing decision-making factors of young adult consumers and it employs two different effect size measures. In addition, the results outline several implications for marketing practice and it suggests possible directions for future research in this area.

2 Slovenia was included in the study as a sort of European “yardstick”.

2. PURCHASING DECISION-MAKING FACTORS AND YOUNG ADULT CONSUMERS

2.1 CONSUMER DECISION-MAKING TYPOLOGIES

Extensive research and myriad typological proposals have tried to model consumer decision-making and shopping patterns that fall outside the physical limits of this paper (for an overview see Wesley, LeHew & Woodside, 2006). Lysonski, Durvasula & Zotos (1996, p. 10) point to “*many attempts to profile*” consumer decision-making styles in order to “*understand a consumer’s shopping behavior so as to use this as a counseling advice*” and to increase the effectiveness of marketing, segmentation and advertising effectiveness. In this context, Sproles (1985, p. 79) defines the consumer decision-making style as “*a patterned, mental, cognitive orientation towards shopping and purchasing, which constantly dominates the consumer’s choices*” and followed it by saying “*these traits are ever-present, predictable, central driving forces in decision-making*”.

Most generally, Lysonski, Durvasula & Zotos (1996) outline three different approaches in the study of consumer decision-making, namely:

- *psychographic and life-style approach* (i.e. Wells, 1974; Lastovicka, 1982).
- *consumer typology approach* (i.e. Stone, 1954; Darden & Ashton, 1974; Moschis, 1976).

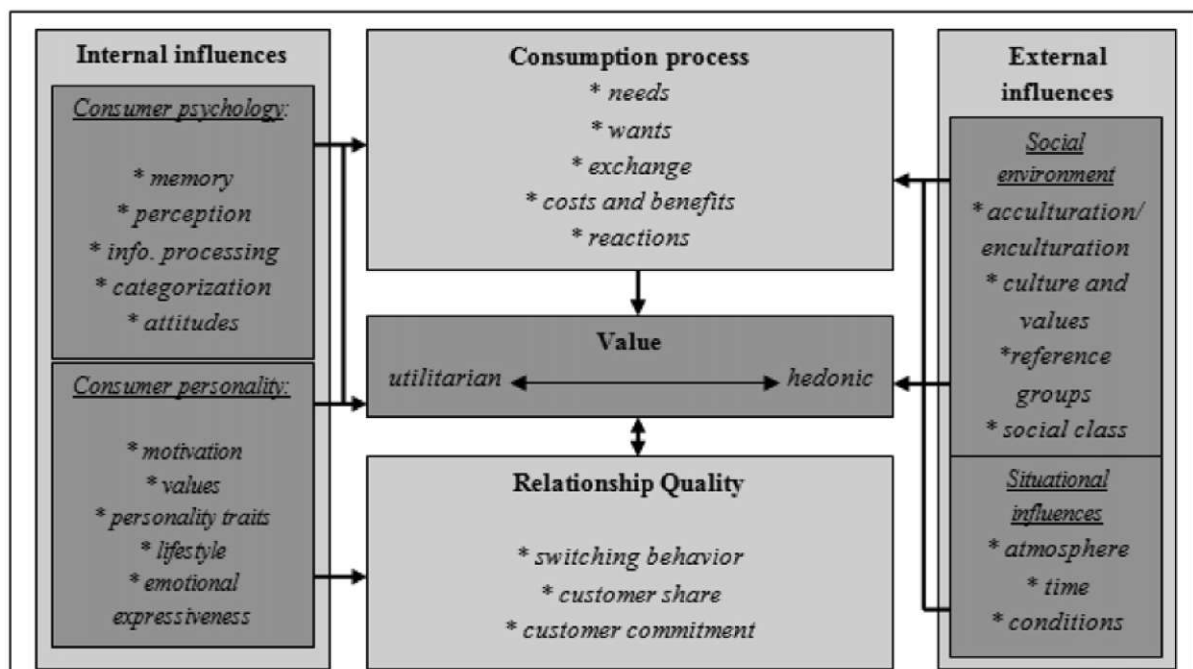
- *consumer characteristics approach* (i.e. Sproles, 1985; Sproles & Kendall, 1986; Sproles & Sproles, 1990).

In addition to this classification, East (1997) provides an alternative classification of consumer decision-making approaches, which are structured around: (a) *external conditioning* (based on external stimuli like advertising); (b) *cognition (cognitive approach)* (related to key product/service characteristics, information and available alternatives); and (c) *social interaction* (i.e. personal and group identity).

Providing perhaps one of the most comprehensive conceptual overviews of the factors influencing consumer decision-making, Figure 1 displays the *Consumer value framework* by Babin & Harris (2009), which distinguishes between *utilitarian vs. hedonic consumption behavior*, influenced by internal and external influences, the characteristics of the consumption process itself, and the overall relationship quality, in which the consumers’ decision-making is embedded.

Despite a wide variety of consumer decision-making approaches, Lysonski, Durvasula & Zotos (1996) position the *consumer characteristic approach* by Sproles & Kendall (1986) as the dominant consumer decision-making approach in the field. Their *Consumer Style Inventory (CSI)* model is built on the identification of several dozen elements shaping consumers’ cognitive and affective orientations towards shopping, opera-

Figure 1: Overview of the *Consumer value framework*



Source: Adapted from Rašković & Grahek, 2011; cf. Babin & Harris, 2009.

tionalized in a 40-item CSI instrument. Sproles & Kendall (1986, p. 276) defined the consumer decision-making style as “a mental orientation characterizing a consumer’s approach to making choices”. While the CSI typology of Sproles & Kendall (1986) distinguishes between eight different consumer decision-making styles³, Mokhlis & Salleh (2009, p. 576) point to most applications of the CSI instrument producing “varying portions of the original CSI factors, while none of them reproduce all eight completely”.

This paper employs the Fan & Xiao’s (1998) survey instrument, built directly from the Sproles & Kendall’s (1986) CSI typology. By testing Fan & Xiao’s (1998) original model (developed specifically for the Chinese young-adult consumers) and applying it to a novel empirical setting, we directly follow the recommendation by Walsh, Mitchell & Thurau (2001). They emphasized not only to test the CSI across different populations and contexts, but also the need for cross-validations in different cultural contexts.

2.2 SPECIFICS OF YOUNG ADULT CONSUMERS

With regards to consumer decision-making patterns of young-adult consumers, studies have shown significant differences between young adult and other consumer segments in decision-making and consumer attitudes (Drolet, Williams & Lau-Gesk, 2007). Young adult consumers are believed to be more *hedonistic* in their consumer behavior and decision-making, which can also be related to how they spend their time (Cardoso & Pinto, 2010). They also often shop more impulsively (Grønhoj, 2007). Nonetheless, *price* remains one of the key decision factors on which this segment bases its decision (Ganassali et al., 2007). Another important factor is the issue of *branding*, since young adults are more fashion and media-oriented and are important trend spotters. They are also very susceptible to advertising, particularly personality endorsed (Herbst & Burger, 2002). Strong peer-to-peer communication in decision-making and purchasing is another specific characteristic of this segment. The importance of within reference group communication mirrors itself in both strong information utilization before purchasing and post-purchase information sharing (Achenreiner, 1997). Furthermore, while a country of origin and consumer ethnocentrism may

3 The eight consumer decision-making styles within the Sproles & Kendall (1986) typology include the: (1) *quality conscious (a perfectionist)*, (2) *brand conscious*, (3) *fashion and novelty conscious*, (4) *hedonic consumption*, (5) *impulsive*, (6) *confused by overchoice*, (7) *price conscious*, and (8) a *brand-loyal (habitual) style*.

vary across countries, young adult consumers usually display very low ethnocentric tendencies (Wong, Polonsky & Garma, 2008).

Furthermore, Grant & Waite (2003), Xie & Singh (2007), and Cardoso & Pinto (2010) provide four key reasons for marketing’s growing interest in young adult consumers and their decision-making:

- Young adult consumers are still in the process of forming their personalities and still seek to establish their own consumption patterns as part of their own identity as future adults (Holbrook & Schindler, 1989).
- Young adult consumer act as important *opinion leaders* within their surrounding social environments.
- Young adult consumers act not only as trend conduits, but also as socio-cultural ‘change agents’ (Leslie, Sparling & Owen, 2001).
- With their increased economic autonomy, decision-making and purchasing power (Cardoso & Pinto, 2010) young adults are increasingly becoming a powerful spending group (Moschis, 1987; Grant & Waite, 2003).

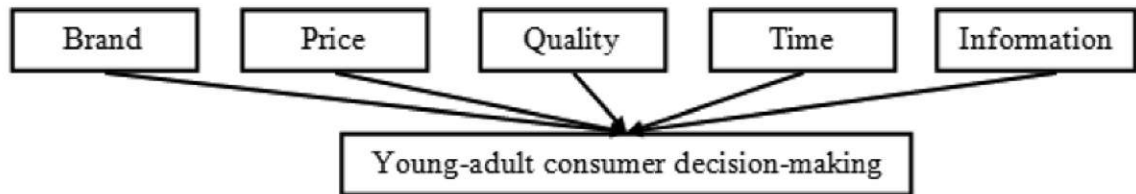
Despite several reasons in favor of studying young adult consumers and their decision-making, this “niche” within consumer behavior and cross-cultural research is heavily under-researched (Wong, Polonsky & Garma, 2008; Cardoso & Pinto, 2010) and it lacks stronger empirical (Cardoso & Pinto, 2010) and generalizable evidence (Arnold & Reynolds, 2003).

3. RESEARCH HYPOTHESES

Based on the general premise of young adult consumers being *global citizens of the world*, “holding a common culture” (Fabris, 2003) with quite “unified tastes” (Gianluigi, 1992), and a segment that is universality “*cosmopolitan*” (Thompson & Tambyah, 1999), the main research hypothesis focuses on the degree of universality in purchasing decision-making factors across the studied samples of young adult consumers. Therefore, the first hypothesis is as follows:

H₁: Supporting a universalist perspective, there will be no statistically significant culture effect size differences across the studied young adult samples on the selected purchasing decision-making factors.

However, as my research compares selected purchasing decision-making factors across western and non-western young adult samples the second hypothesis focuses on the existence of non-significant culture effect size differences within the Muslim group of young-adult consumer

Figure 2: Fan & Xiao's (1998) five-factor young adult consumer decision-making model

Source: Adapted from Fan & Xiao (1998).

samples, based on the work by Liefeld, Wall & Heslop (1999). Therefore, the second hypothesis is as follows:

H₂: In case significant culture effect size differences can be established for any of the selected purchasing decision-making factors, these differences can be attributed to the inclusion of both western and non-western young-adult consumers in the analysis, and do not hold only within a non-western, Muslim comparison.

4. METHODOLOGY AND DATA

4.1 SURVEY INSTRUMENT

Figure 2 displays the five-factor decision-making model of young adult Chinese consumers published by Fan & Xiao (1998) in the *Journal of Consumer Affairs*. This model was selected for two primary reasons. First, it is conceptually and substantively based on Sproles & Kendall's (1986) CSI framework, and second, it was specifically created for non-Western, young adult consumer decision-making contexts.

Since the original (31-item) model of Fan & Xiao (1998) included several items with a factor loading below 0.5 the initial quality of the survey instrument was first performed through *confirmatory factor analysis* (CFA) and testing goodness-of-fit statistics of the reflective *measurement model* within *Mplus*⁴. Given unsatisfactory goodness-of-fit statistics for the original 31 items of the Fan & Xiao (1998) model, 14 items from the original 31-item model were dropped. By removing items with similar loadings on two different

4 While the statistical package *Mplus* is used mainly for structural equation modeling, it also enables the testing of simple measurement models and it provides comprehensive goodness-of-fit statistics, like with testing structural models.

factors and by removing items with factor loadings below 0.5 (in absolute values), the "purified" 17-item measurement model produced the following goodness-of-fit statistics within *Mplus*:

- $\chi^2 = 180.57$; $df = 59$;
- $\chi^2/df = 3.06$;
- $p = 0.000$;
- RMSEA = 0.068;
- CFI = 0.90 and TLI = 0.89

In the next step, Cronbach alpha measures were calculated to check the overall reliability of the five decision-making factors within the "purified" 17-item model. Table 1 provides a summary of the obtained reliability measures.

Given that the "Time consciousness" construct in the "purified" Fan & Xiao (1998) model was still below the critical value of 0.6, it was excluded from further analysis. In addition, no scalar invariance testing was performed, since no dependent variables were included in the analysis and only simple relative comparisons were made on observed, not latent scores.

4.2 DATA COLLECTION AND SAMPLE CHARACTERISTICS

Overall data was collected on 445 young adult consumers of 15-30 years old from Slovenia (29.2%), Malaysia (24.9%), Kazakhstan (23.1%) and Turkey (22.7%) in the early summer of 2010⁵. Data was collected through a structured web-based survey (administered only in English), using a *convenience snow ball* sampling approach to various social media sites (Facebook, MySpace, LinkedIn etc.). Several respondent demographic characteristics show (see Table 2) the samples

5 An overall response rate to the on-line survey was in the 25% range.

Table 1: Reliability measures for the five latent factors of the "purified" Fan & Xiao model

Dimension	Brand Consciousness	Time Consciousness	Quality Consciousness	Price Consciousness	Information Utilization
Cronbach α	0.64	0.50 (excluded)	0.79	0.61	0.73

were highly *matched*⁶. It is at this point important to emphasize that the samples are by no means country representative. The respondents came mainly from urban areas, they were above average educated and had above average disposable incomes and access to the Internet. The data should, therefore, be used only for relative cross-country comparisons and effect size calculations; absolute score explanations or any generalizability for that matter should be strictly avoided.

In addition to these characteristics, a predominant share of respondents within each country sample stated having “above average disposable incomes” (relative to the country national average). Overall, 49% of respondents earned part of their income by working, whereas 56% also received funding from family members (multiple answers were available).

4.3 EFFECT SIZE MEASURES

Due to the underlying complexity of most psychological and social phenomena Van de Vijver (2003) points out that statistics should be in these contexts beyond testing merely for statistical differences and should focus primarily at searching for differences in patterns. This is also consistent with the importance of exploring relative and ordering differences, not testing absolute values and differences in cross-cultural comparisons (Schwartz, 1999; Hofstede, 2001). Cankar & Bajec (2003) also believe the use of significance testing to be actually more harmful than beneficial to scientific research, since it is not complemented by an evaluation of variable effect sizes (cf. Cohen, 1990; Thomson, 1999a, and 1999b). Thus, Kirk (1996) stresses the inappropriateness of making generalized judgments

6 The use of matched sampling in cross-cultural multi-country comparison is a very common research practice (Hofstede, 1997), and also recommended (Van de Vijver & Leung, 1997; Cavusgil & Das, 1997; Schwartz & Sagie, 2000; Terracciano et al., 2005), since demographic variables, such as *level of education*, have been shown to significantly shape human behavior (Berry et al., 2011). For more on this issue please see Rašković & Kržišnik (2010).

on social relational phenomena based on significance testing, since it is influenced by sample size (Breaugh, 2003). Putting substantive issues aside, most researchers thus test and look for differences, without actually looking at their size (Cohen, 1994; Kirk, 1996; Haller & Krauss, 2002) or understanding the implications of their conclusions from such testing (Cohen, 1994).

Cohen (1988, p. 9-10) defines an effect size as “the degree to which the phenomenon is present in the population or the degree to which the null hypothesis is false”. However, since most research in social sciences is based on samples, rather than data on whole populations, Rosenthal (1994) points to the sample-based nature of most effect size measures employed today. Despite the substantive value of measuring the effect size, Cohen (1992, p. 155) notes that even with psychological research most “researchers continue to ignore power analysis” leading to a “low level of consciousness about effect size” (cf. Cohen, 1990). While more recently this trend has started to improve (Rosenthal, Rosnow & Rubin, 2000), it has been employed in a too “*simplistic manner*” with methodological mistakes and without a clear understanding of the methodological background of such power analysis (Breaugh, 2003, p. 79; cf. Fichman, 1999; Rosenthal, 1994). In part, this may also be attributed to a large array of effect size measures and indices (Breaugh, 2003; see Kirk, 1996 for an overview), which are in turn also grouped differently by different authors. Richardson (1996) distinguishes between effect sizes based on either (a) standardized differences between group means or (b) measures of explained variance. On the other hand, Thompson (2000) distinguishes between a summary of both previous groups and (c) measures of association. Furthermore, Fan (2001, p. 277) adds to this: “*Because the terminology used for describing the variety of effect size measures has not been standardized in the literature, confusion sometimes occurs about what effect-size measure has been reported in the study.*” (cf. Kirk, 1996) Given a careful overview of the literature and

Table 2: Key sample characteristics (indicating matched samples)

	Turkey		Malaysia		Kazakhstan		Slovenia	
Number of respondents	101		111		103		130	
Gender (male/female)	41.9%	58.1%	43.1%	56.9%	37.9%	62.1%	31.5%	68.5%
Average age (standard deviation)	23 years (4.5)		22 years (2.6)		24 years (3.5)		25 years (3.0)	
Share of urban population	96.2%		94.5%		93.2%		87.7%	
Share of respondents with at least 2-year college degree	74.3%		78.0%		79.6%		71.4%	

Table 3: Employed effect size measures and their methodological background

Measure	Type	Formula	Reference values
Partial eta square (η_p^2)	Explained variance	$\eta_p^2 = \frac{SS_{effect}}{SS_{effect} + SS_{error}}$	Young (1993): effect size as a percentage
Cohen's <i>d</i>	Std. mean difference	$d = (M_1 - M_2) / \sigma_{pooled}$ $\sigma_{pooled} = \sqrt{\frac{1}{2}(\sigma_1^2 + \sigma_2^2)}$	Cohen (1988): <i>small</i> : 0.2, <i>medium</i> : 0.5 and <i>large</i> : 0.8

Note: SS_{effect} = sum of squares for effect of interest; SS_{error} = sum of squares for error term; σ = standard deviation; σ^2 = variance; $SS_{treatment}$ = sum of squares between groups; SS_{total} = total sum of squares; MS_{error} = mean square of the error term.

various effect size measures, as well as based on the recommendations by Breaugh (2003), two different effect size measures are employed in our research, as summarized in Table 3.

The first effect size measure to be employed in our analyses is the partial eta square statistic (η_p^2), which belongs to the group of effect size measures based on explained variance. This effect size measure has been employed as one of the most frequent measures of effect sizes (Pallant, 2001; Young, 1993). However, given a critique of effect size measure based on explained variance (see Breaugh, 2003), an alternative effect size measure based on standard mean difference is also employed in our analysis, as recommended by Cohen (1988). Here, Breaugh (2003, p. 80) points to Cohen's *d* statistic being the most commonly used effect size measures in the literature today.

5. RESULTS

5.1 RELATIVE IMPORTANCE OF DECISION-MAKING FACTORS

Table 4 provides an overview of the aggregate mean scores for each decision-making factor, measured on a 7-point scale for all of the four

compared countries.

According to Table 4, Slovenia scores relatively lowest on all four decision-making factors, with the highest difference relative to the three Muslim countries on the first factor of *brand* importance. The smallest relative difference among the four countries is in the factor of *price*. With regards to statistically significant differences among the three Muslim countries there is a statistical difference between Malaysia and Turkey in the decision-making factor of *quality*, and between Malaysia and Kazakhstan in the factor of *price*. The most important factor among the young adult consumers in our research both, overall and at the level of each specific country, is the decision-making factor of *quality*, followed by *price*; jointly indicating a strong *quality-price* relationship.

Linking the relative importance of both *quality* and *price* to *power distance* (as a cultural proxy), we can see that Malaysia's extremely high PDI score (highest country ranking) corresponds to statistically significantly higher scores related to the importance of both *quality* and *price*, compared to the remaining three countries (with lower and more comparable PDI scores).

Table 4: Comparison of decision factor mean scores across countries (7-point scale)

Dimension	Slovenia	Malaysia	Kazakhstan	Turkey
<i>Brand (conscious)</i>	3.74 (0.94)	4.28 (0.90)	4.23 (0.90)	4.17 (0.70)
<i>Quality (conscious)</i>	4.59 (1.09)	5.18 (0.89)	4.93 (1.09)	4.65 (1.15)
<i>Price (conscious)</i>	4.37 (0.88)	4.84 (0.83)	4.42 (0.75)	4.65 (0.87)
<i>Information utilization</i>	3.72 (1.08)	3.90 (0.99)	3.76 (1.08)	3.94 (1.10)

Note: Brackets show the value of standard deviations.

Table 5: Linking the importance of *quality* and *price* with culture (*power distance*)

Dimension	Slovenia	Malaysia	Kazakhstan	Turkey
<i>Power distance index (PDI)*</i>	71	104	n/a (~ 79)**	66
<i>Quality (conscious)</i>	4.59	5.18	4.93	4.65
<i>Price (conscious)</i>	4.37	4.84	4.42	4.65

Note: * Based on Hofstede's (2001) typology and data. The PDI is measured on a scale from 0 to 120, with a higher index value corresponding to a higher degree of power inequality. ** While the PDI score is not available for Kazakhstan, we have used the combined average PDI score for all Muslim countries as a proxy.

5.2 CULTURE EFFECT SIZE

As it can be seen from the data in Table 5 and taking into account all four countries, the *brand* decision-making factor has the highest effect size of culture (6.2%), followed by *price* (5.1%) and *quality* (4.9%). All three factors are thus statistically significant, while *information utilization* is not. Comparing only the Muslim countries the results change, with the *brand* factor suddenly becoming non-significant, while *price* and *quality* remain statistically significant.

The results show that *information utilization* is not affected by culture and that *price* and *quality* remain important with regards to effect size of culture. The most dramatic impact of the effect size of culture is however seen for the factor *brand* that goes from being the most important factor with a 6.2% effect size across the four countries to the least important factor in terms of effect size of culture when comparing only the Muslim countries. Based on the results both hypotheses can be rejected. While rejecting the first hypothesis shows that culture affects the importance of several most cited decision-making factors in the literature (*brand*, *price* and *quality*) in a diverse European-Muslim multi country sample, the rejection of the second hypothesis also shows that these results are for the factors of *price* and *quality* 'robust' also within the Muslim subsample itself.

Lastly, Table 7 shows the pair-wise calculations of *Cohen's d* effect size coefficient. As it can be seen from the calculations, *Cohen's d* effect size measures are on average slightly lower (compa-

red to partial eta square testing), although still indicating low-to-medium effect sizes for the decision-making factors of *quality* and *price*.

Similarly, and expectedly, much of the cross-cultural variability lies between Slovenia and the three Muslim countries. However, by looking at the culture effect sizes only among the three Muslim countries, the remaining effect size seems to correspond to differences in PDI for the decision-making factor of *quality* (highest pair-wise *d* coefficient is for the comparison between Malaysia and Turkey).

6. LIMITATIONS OF THE RESEARCH AND RECOMMENDATIONS

The use of a *matched snow ball sample* may be subject to critique, however matched simple convenience samples are extensively employed in cross-cultural research (see Rašković & Kržišnik, 2010); they offer control of important demographic variables. The use of snow ball sampling may on the other hand result in a strong respondent bias on important geographic, demographic and psychographic respondent characteristics. While a validated multi-item measurement questionnaire has been used to ensure validity, the questionnaire was administered only in English.

The timing of the research during summer must also be taken into account. Additionally, the use of a particular effect size measure may also be taken into consideration, and alternative measures could also be employed (see Howell, 1992, for more on this). Furthermore, in looking at how

Table 6: Partial eta square effect size measure of culture

	Brand	Quality	Price	Info.
4 countries: Partial eta square effect size*	6.2%	4.9%	5.1%	0.8%
4 countries: Level of significance	(0.000)	(0.000)	(0.000)	(0.335)
Only Muslim: Partial eta square effect size*	0.3%	4.2%	4.4%	0.5%
Only Muslim: Level of significance	(0.629)	(0.01)	(0.01)	(0.428)

Note: In interpreting partial eta square effect size results, please refer to the formula and method of calculation.

Table 7: Cohen's d effect size pair-wise country estimates (*d* values in absolute)

Brand				
	Turkey	Malaysia	Kazakhstan	Slovenia
Turkey	0	...	...	...
Malaysia	0.13	0	...	...
Kazakhstan	0.07	0.07	0	...
Slovenia	0.52**	0.59**	0.53**	0
Quality				
	Turkey	Malaysia	Kazakhstan	Slovenia
Turkey	0	...	...	...
Malaysia	0.52**	0	...	...
Kazakhstan	0.25*	0.25*	0	...
Slovenia	0.05	0.59**	0.31*	0
Price				
	Turkey	Malaysia	Kazakhstan	Slovenia
Turkey	0	...	...	...
Malaysia	0.22*	0	...	...
Kazakhstan	0.28*	0.53**	0	...
Slovenia	0.32*	0.55**	0.06	0
Time				
	Turkey	Malaysia	Kazakhstan	Slovenia
Turkey	0	...	...	...
Malaysia	0.04	0	...	...
Kazakhstan	0.17	0.14	0	...
Slovenia	0.20*	0.17	0.04	0

Note: * Corresponds to weak effect size (Cohen, 1992); ** Corresponds to medium effect size (Cohen, 1992).

much effect size can be reduced by splitting the data between a European subsample and a Muslim subsample, having both subsamples more balanced in terms of the number of countries would make the results much more comparable. Furthermore, the research did not measure the level of either religious beliefs or practices in any of the three Muslim countries. Despite holding a common religious background, there are most likely very large religious differences between the three selected Muslim countries, with Malaysia probably the most religiously orthodox and Kazakhstan the least. Nonetheless, no control variables were included in our analysis regarding either religious background of the respondents or the level of their religious behavior.

In terms of the recommendations for future research, a more representative sampling technique and including a more balanced subsample of European countries is recommended. In addition, it would also be interesting to learn how much the geographical location of countries (as a proxy for cultural similarity) within the Muslim subsample would impact the results on the culture effect size within the Muslim subsample, as one could perhaps argue that Malaysia, Kazakhstan and Turkey are very diverse Muslim countries. Therefore,

future research should also pay more attention to measuring directly both cultural, as well as religious characteristics of the respondents.

7. IMPLICATIONS FOR THEORY AND PRACTICE

Our results show that a strictly universalist approach does not hold and that there is a degree of cultural contingency in the decision-making factors of young adult consumers; both in a European-Muslim and only Muslim context. Furthermore, the results indicate that cultural contingency is linked to some of the most often referred to decision-making factors in literature (i.e. *price* and *quality*). On the other hand, the role of *brands* becomes more important on the aggregate European-Muslim comparison level, but less important within a more 'rounded' Muslim sub-context. The dramatic change of the *brand* factor, going from having the highest culture effect size in a European-Muslim comparison to being statistically non-significant within the Muslim sub-context, indicates a twofold cultural contingency perspective. On the first level, some of the contingency is related directly to the specifics of a particular national culture, corresponding to the country level analysis. On the second level, some of the contingency is however also embedded in a

wider 'regional cluster' of countries. It is perhaps here that cross-cultural and international marketing research may still be lacking all the necessary tools for measuring and addressing cultural contingency, as most of the tools are based on large western national cultures (e.g. the US).

In terms of marketing practice, the results in Table 2 indicate that *quality* and *price* are the two most important decision-making factors. Thus, creating a clear *quality-at-a-good price* positioning seems to be the appropriate marketing strategy for winning young adult consumers. One has to only look at a fashion giant Zara to see the success of such strategy. On the other hand, the issue of *branding* is more complicated. While personality-endorsed products seem to be successful in capturing the attention of young adult consumers, building brand equity in their eyes should be again more related to the *quality-at-a-good price* aspect, while at the same time being sensitive to regional and cultural specifics. Thus, an effective brand should mirror a universal message of *quality-at-a-good price*, and a regionally adapted 'personality'.

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