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REVIEW

of the doctoral dissertation of Anna Brack,
entitled "Dynamics of Eating Habits of Sweets: German, Polish and Russian Consumers on
the Confectionery Market" prepared under scientific supervision of dr hab. Anna Nikodemka
- Wołowik, prof. UG and supporting supervisor dr Dagmara Wach,
University of Gdańsk, Faculty of Economics, Sopot 2022, pp. 169 (including appendices)

The formal basis for the review is a letter addressed by dr hab. Przemysław Borkowski,
prof UG, the Chairman of the Economics and Finance Discipline Council, University of
Gdańsk, dated 30th June 2022 concerning the preparation of the review of the doctoral
dissertation of Anna Brack.

The attached documentation indicates that this PhD thesis is positioned in the discipline
of economics and finance.

While reviewing the dissertation the Act of 20th July 2018 on Law on higher education
and science (uniform text: Journal of Laws of 2021 item 478) was taken into consideration as
a legal basis. As indicated in the document a doctoral dissertation demonstrates general
theoretical knowledge of the candidate in a given discipline as well as the ability to conduct
scientific work independently. The subject of the doctoral dissertation is an original solution to
a scientific problem, an original solution in the field of applying the results of own scientific
research in the economic or social sphere, or an original artistic achievement.

The objective of the review is to answer the question whether this PhD thesis meets the
requirements as specified in this act.

Doctoral thesis of Anna Brack has 169 pages (including the attachment). It is composed
of an introduction, six chapters and a bibliography. Conclusions regarding the entire doctoral
dissertation are included in chapter six. Attachment includes list of tables, list of figures and
questionnaire (English version) used in the study.

The subject area and the topic of the PhD thesis

The subject of dissertation is part of an important area of research on consumer behaviour on the food market. The area of the dissertation regarding the confectionery market is interesting in cognitive terms and still relatively little recognized. The choice of the work topic was multi-threaded justified by the author. The fact that the confectionery products are not essential for customer to survive was underlined, but it would be worth pointing out the sweet ability to meet different consumer's needs. The subject area discussed by the Author is interesting and original. The dissertation may be particularly important for researchers of consumer behaviour on the confectionery market, but also for producers (especially globally acting producers) and even for retailers.

The little space is devoted in the literature on the subject to the issues concerning the confectionery market. The author correctly identifies the research gap (it would be also advisable to conduct a bibliometric test – e.g. using the Scopus database of scientific publications).

The title of the dissertation „Dynamics of eating habits of sweets: German, Polish and Russian consumers on the confectionery market” however would require more precision while the dynamic is not the most important in this dissertation, but the habits of eating sweets and consumers behaviour on the confectionery market in the selected countries.

In my opinion, the choice of the research field made by the Author is justified and meets the requirements established for doctoral thesis. The fact that the dissertation concerns a specific confectionery market considered internationally is a new approach to the problem of consumer behaviour on food market and proves the originality of doctoral dissertation.

Doctoral dissertation of Anna Brack is located within the scientific discipline of economics and finance, while referring to the problems of consumer behaviour.

Goal, research questions and hypotheses of the dissertation

The major purpose of the dissertation which concerns "*deepening the understanding the consumer behaviour dynamics on the international confectionery market, perceived from two perspectives: theoretical filling the gaps in the prior research on this field, and managerial, showing practical aspects of the investigation research*" (p.16) is formulated almost correctly, but regarding the scope of the work, the question of dynamics should not be underlined in the main goal. Additionally the author stated: "*the work aimed to identify possible synergies that could result in a optimized production and consequently a consumer-oriented offer*" (point 5.1,

p. 121). In the approach presented by the Doctoral Candidate there is no indication of the main hypothesis.

In the introduction the author formulated four questions and assumed four hypotheses for verification:

RQ1: *What motivates consumers to buy confectionery items, with regard to the sustainability concept?*

H1: *Sustainable production of confectionery goods leads to increased consumption.*

RQ2: *What are the consumer preferences regarding a country criterion?*

H2: *A country-specific production does not lead to higher demand for confectionery products, but in the point 4.2 Author stated that: "the hypothesis H2 assumes that country-specific processing of the market for confectionery does not lead to higher demand"(p.81).*

RQ3: *How have taste preferences in consumer segments changed over time?*

H3: *An orientation on age clusters (generations) does not lead to higher demand of confectionery products.*

RQ4: *How do the consumers perceive a wide range of confectionery that may result in cognitive dissonance?*

H4: *Consumer feel overwhelmed by the packaging variety*

In my opinion it would be better to change the order of the questions (RQ2, RQ3, RQ1, RQ4) starting from the general (and the most important) to the more specific. The RQ3 question should be slightly modified - differences by age group – not „over time“. The author's intentions are more obvious in the hypothesis H3 where age clusters (generations) appear. The hypothesis 3 in the part 4.3 has been modified in relation to hypothesis 3 in the introduction of the dissertation – and it stated that „marketing for confectionery market according to the age groups would not result in higher demand“ (p.92). It should be explained why the hypothesis H4 is related to the packaging while question RQ4 is related to confectionery variety.

According to the author the selected issues contained in the questions are essential for the dissertation and the conducted research.

Summing up, in my view, the main goal has been defined almost correctly, adequately to the adopted research problem. Some of the research questions and posed hypotheses should be slightly modified or clarified. The content of the dissertation and the scope of the research were correctly subordinated to the implementation of the objectives of the study and the verification of hypotheses.

Information sources and research methods

The theoretical part of the doctoral thesis is based on literature review conducted by the Author. Presented bibliography list consists of nearly 190 literature items (including books, articles published in scientific journals). This number should be considered sufficient. The author refers to foreign literature. The sources have been properly selected and up-to-date. The author should also consider the literature on international market research (including the issue of equivalence in international research). The results of literature studies are in chapter 1 "Literature review" and in part 5.1. "Consideration of the major findings". Chapter 2 is based mainly on statistical sources.

Primary sources of information were used in the study – the survey was conducted online on the web application platform named "SoSiSurvey" among consumers in three countries: Germany, Poland and Russia. The questionnaire was finally completed by 727 participants (255 from Germany, 215 from Poland and 257 from Russia).

A particular challenge for the author was to survey three different markets. From the perspective of the research questions, I assess the selection of the research method positively, although sometimes additional qualitative research (before quantitative research) makes it possible to better understand the specificity of consumer behaviour (especially regarding consumers from different countries).

The structure of the work. Substantive assessment of the dissertation

The dissertation consists of six chapters of varying volume. The logical structure and content of individual parts consistently is subordinated to the purpose of the work. Volume of the chapters is not appropriate - there is no symmetry between the size of chapters. Three first chapters of the dissertation are rather short (chapter 1 -16 pp, chapter 2 – 13 pp, chapter 3 – 13 pp). The chapter 4 is excessively large – 59 pp. Its volume is justified only by a large number of tables and figures with the results of direct research. I have also an editorial comments that there are many empty spaces on the pages, which affected the volume of this part of the dissertation.

The discussion, research implications, conclusions, limitations and further research should not be described as separate chapters (in this work chapter 5 (pp 7) and chapter 6 (pp 5)). In my opinion these elements (especially chapter 6) should be included in the final conclusions of the work.

The dissertation starts with the introduction in which the author described the research background, correctly identified the knowledge gap and presented the study goal as well as

research questions and hypotheses. The introduction also includes the explanation of reasons for choosing the subject area of the dissertation. The author described the structure of the dissertation regarding content of each chapter and synthetically presented it in Figure 1 (p.19).

The chapter 1 is devoted to the literature review. The title of this chapter, "*Literature review*" as well as title of point 1.1 ("*Micro-and macro-level approach*") are incomplete. In the title it should be indicated what the review literature is devoted to and what the micro- and macro-level approach concerns.

In this part of the dissertation Author presented selected theories of consumer behavior, consumer trends and habits triggered by the industry changes, a problem of choice from the consumer perspective as well as consumer mega-segments. The author indicates the importance of consumption by presenting selected theories on consumption, including the theories of Keynes and Friedman. The choice of these theories should be justified.

In the part „Selected theories of consumer behaviour” the author should underline that consumer behaviour is important not only for producing companies, but also for retailers. In-depth research is necessary to create not only brand, but also to create the proper distribution channel. Author explained the essence of consumer behaviour and presented theories and concepts of consumer behaviour. In this part of the work, determinants of consumer behaviour (e.g. psychological, economic, sociocultural determinants) and their mutual interdependence should be considered (the author refers to them in chapter 3 (p. 3.1, p. 49)). Also the issues of consumer lifestyle and the importance of a healthy lifestyle for consumers were omitted – the issues which may be important in the context of the research of consumer behaviour on the confectionery market.

The table1 “Consumer trends and habits triggered by the industry changes” (p.27) needs to be discussed in more detail. The sources of information used to prepare this table should be also indicated. The author has very deeply recognized the problem of consumer choice taking into account mainly the number of product offers to choose (p.1.4). Such selective approach to consumer decisions should be justified.

At the end of chapter 1, the author presented consumer mega-segments (consumer generations). It would be important for this part of the dissertation to use the available research results related to the behaviour of individual generations of consumers on the food market (e.g. the Y generation is called, for example, the "yum" generation – what consumers of Y generation eat is very important for them). What are the differences in the behaviour of these generations, especially on the food or even confectionery market (available results of previous scientific research)? The characteristics of generations indicated by the author and the consequences for

their consumer behaviour concern almost every market. More sources of information should be used for the characteristics of the generations, also taking into account information on, for example, the size of these generations in Germany, Poland or Russia. What are the differences between the generations in these countries? Chapter 1 should be supplemented with conclusions concerning the entire chapter.

Chapter 2 of the dissertation refers to the dynamics of selected confectionery markets. The title of point 2.1. "*Specificity of the confectionery market*" suggests that the point contents such issues like the essence, elements and characteristics of the confectionery market. Considering the content of this point and its volume, it is rather an introduction to the following sections of chapter 2.

It may be debatable whether "*(...) People in general have a positive attitude, right from the start, when it comes to sweets*". Health problems of consumers, the increase in the number of consumers struggling with diabetes, and growing popularity of a healthy lifestyle may contradict this position.

At the beginning of point 2.1. some mental shortcuts appear: "*As the topic of this dissertation is the dynamics of countries such as Germany, Poland, and Russia, a comparative look at these markets is warranted (...). Russia has the highest sales volume level*". This part of point 2.1. requires clarification (e.g. sales per capita of what?).

Using sources of statistical information in the following sections of Chapter 2, the dynamics of the confectionery market in Germany, Poland and Russia were presented. This part of the work could be enriched with more detailed information on the sweet supply entities in these countries. The chapter 2 does not contain conclusions summarizing this part of the dissertation – e.g. the synthetic comparison of the confectionery market in these three countries.

Two first chapters provide the basis for the project of direct research. Chapter 3 is devoted to the research methodology applied in the dissertation and consists of five subsections: background, methods and procedures; the questionnaire; conducting pilot study, the resonance and the data analysis and hypothesis testing. For the conceptual basis of the study the decision analytic was chosen.

In the chapter 3 it would be better to present synthetically research assumptions (for example in table) - aim of the research, subject scope, object scope, spatial and time range, research method and techniques, name of the research tool, research sample (method, criterium).

The research method as well as sampling method were correctly chosen (non-probability convenience/purposing sampling method and snow-bowling technique to gain responses). The size of the research sample was 783 (225 Germany, 215 Poland, 257 Russia).

Regarding conducting research in three countries the question arises to what extent equivalence has been taken into account in international consumer research. Is the development of the questionnaire in three different language versions sufficient for the reliability of the obtained results? Also qualitative research could be considered for the better understanding of the specificity of consumer behaviour in the confectionery market in these three countries (e.g. with the use of focus on-line interview).

A properly designed on-line questionnaire (appendix 1) was used in the research. The questionnaire consists of introduction, essential questions and questions regarding personal data (in total 24 questions). Various scales (including Likert scales) were used in the questions.

I have the following minor comments regarding the research tool:

- the questionnaire should have its title (there is no questionnaire attached in the annex);
- everyone belongs to the household (it can be 1 person household), it's not necessary to use "ID03_08 = I do not have an own household;
- in the question connected with children it's necessary to specify the age of the children (they could be adult children) - this is important for research regarding the confectionery market;
- in question 4 ("*For whom or in what situation do you buy sweets?*") it would be better to add "most often";
- in the case of confectionery is important the way of presenting the product at the point of sale (e.g. place of display, special exhibitions) - this factor was not included.

The author correctly conducted the pilot study to improve the questionnaire.

The presented structure of the respondents by age was different in Germany, Poland and Russia, which could have had an impact on the obtained results and it should be included in the conclusions concerning the research results.

The title of point 3.1. "*Background, methods and procedures*" should be more precise (of what?). In my opinion the title of point 3.4 should be "Research implementation and sample characteristics" instead of "*The resonance*".

Chapter 4 "*Consumers on the three confectionary markets in the light of empirical research findings*" includes the results of the conducted research. The obtained data were analysed using descriptive statistic and analysis of variance. In this part of the dissertation the author also refers to selected results of previous research concerning the food market.

The researcher should take into account the fact that the importance of individual factors influencing consumer decisions (e.g. prices) depends on the type of sweets (e.g. pure chocolate block, filled chocolate bar, waffles, pralines, candy, jellies / gummies). In addition, the impact of the price may also depend on the purpose for which sweets are purchased (for personal consumption, gift, etc.) or the economic situation of the surveyed consumers. In the case of the impact of promotion on consumer decisions, it should also be taken into account that the promotions of sweets may be diverse and may also take a non-price form (e.g. packaging for re-use). Selected types of confectioneries have been included in the second part of the presented research results - p. 4.2. "*Relations between country specific production of confectionery and the buyer interest*" and p.4.3. "*Relations between an orientation on age clusters (generations) for confectionery products and consumer's interest*". Point 4.4 is devoted the presentation of the results of research on the importance of packaging for consumer choices. Chapter 4 should be supplemented with conclusions concerning the entire chapter.

Chapter 5 is devoted to the discussion and research implications - considerations of the major findings, theoretical and managerial implications. In point 5.1. the author points out that "*this paper (...) was aimed to investigate what motivates consumers to purchase confectionery*". Regarding the title of the work and its content, this goal was outlined too narrow (in the introduction the author stated: „*the major goal of presented study is deepening the understanding of consumer behaviour dynamic of the international confectionery market.*” (p.16)).

In this part of the work, the author addresses the research questions and dissertation hypotheses, relating them to the research results and selected literature sources. Comments on the questions and hypotheses have been included in the earlier part of the review. The author correctly indicates the theoretical implications of the dissertation in point 5.2. The findings of this thesis may be useful for globally acting confectionery producers -it is underlined in the point 5.3 "*Managerial implications*".

With the adopted structure of the work, chapter 6 is actually not the next chapter, but the summary of the entire work. An important part of this chapter is table 19 (p. 130) containing research questions and related hypotheses, key results and major theories applied. The author is aware of the studies limitations - this is also important from the perspective of further research plans.

Formal aspects of the dissertation

I am not special qualified to evaluate the language, although, in my view, the dissertation is written using correct language (but not free from various language errors) and well-chosen terminology. The work is rather correctly edited, but it would be better to remove empty spaces on selected pages (mainly chapter 4) - this would reduce the volume of work.

In chapter 2 the title of each figure should contain information about the place and time the data relate to (e.g. fig.12, fig.13, fig.14). It would be better to present the information connected with each country in the adjacent columns (Table 5, p. 56) to allow for easier data comparison. The titles of some figures in chapter 4 should be completed - purchasing decisions of what products (figure 19, p.64, figure 20, p.65)? Table 7 (p.68) needs to be refined - empty spaces should be removed. Table 17 is a figure.

From the technical point of view there are some shortcomings, but the work is concurrent with the dissertation standards.

Conclusions

Despite the critical remarks (the criticisms outlined above can be in some cases polemical), the final assessment of the reviewed dissertation is positive. The author demonstrated good general theoretical knowledge in the discipline of Economics and Finance as well as the ability to conduct scientific work independently. The doctoral dissertation of Anna Brack constitutes an original solution to a scientific problem.

An in-dept analysis of the doctoral thesis of Anna Brack leads me to conclusion that the dissertation complies with the legal requirements established for doctoral theses. I recommend to accept the dissertation entitled "Dynamics of Eating Habits of Sweets: German, Polish and Russian Consumers on the Confectionery Market" by Anna Brack under the supervision of prof. Anna Nikodemaska - Wołowik and supporting supervisor dr Dagmara Wach. Therefore I request that Anna Brack be admitted to the public defence.

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