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Dr. hab. Tomasz Potocki, Prof. UR
Faculty of Economics and Finance
Department of Financial Markets and Consumer Finance
University of Rzeszów
Ćwiklińskiej 2
35-601 Rzeszów
Poland

dr hab. Barbara Gołębiewska, prof. SGGW
Chair of the Council of the Discipline of Economics and Finance
Warsaw University of Life Sciences
ul. Nowoursynowska 166
02-787 Warszawa
Poland

Review Report on the PhD Thesis "Food Waste at the Early Stage of Family in Urban Area: A Case Study of Bogor City and Regency, West Java, Indonesia" by Ms Silvia Dewi Sagita Andik.

i. Legal basis for the Review

The official documentation for the doctoral dissertation of Ms Silvia Dewi Sagita Andik, hereinafter referred to as the Author or the PhD candidate, was delivered to me by post by the Research Support Office of the Warsaw University of Life Sciences on 9 April 2026. The legal basis for preparing this review also includes Resolution No. 25/EIF-2025/2026, adopted by the Council of the Discipline of Economics and Finance of the Warsaw University of Life Sciences at its meeting on 24 March 2026, which appointed me as a reviewer of the doctoral dissertation.

This review provides a reasoned assessment of whether Ms Silvia Dewi Sagita Andik's doctoral dissertation fulfils the requirements set out in the procedure for conferring the doctoral degree, conducted pursuant to the Act of 20 July 2018 – Law on Higher Education and Science (Journal of Laws of 2024, item 1571, as amended), as well as in Resolution No. 89-2022/2023 of the Senate of the Warsaw University of Life Sciences of 26 June 2023 on the adoption of the Regulations for conducting procedures for conferring the doctoral degree at the Warsaw University of Life Sciences.

Furthermore, I declare that I am not aware of any circumstances that could compromise my impartiality in preparing this review.

ii. Structure of the Review

The following sections of this review include an evaluation of the dissertation title (1), its structure (2), a general evaluation with issues for further discussion (3), and minor chapter-by-chapter comments (4).

1. An evaluation of the title of the dissertation

The dissertation title is highly informative and well formulated. It clearly identifies the central research focus (food waste), the demographic group of interest (households at the early stages of family life), the spatial setting (an urban area), and the geographical context (Indonesia). In this

sense, the title is appropriate and provides a useful entry point to the work. The identified research gap, research objectives, and formulated hypotheses all follow logically from it.

I cannot, however, fully share the view that the title is consistently reflected in the dissertation's structure and substantive content. Of the four components announced in the title, only the first — food waste — is comprehensively developed throughout the chapters. The remaining three elements — the urban setting, the geographical context, and the early stage of family life — are addressed less consistently and are not always equally visible in the structure of the work. As a result, there is a partial mismatch between the scope promised by the title and the emphasis actually realised in the dissertation, which the candidate may wish to address.

2. An evaluation of the structure of the dissertation

I have some further reservations about the dissertation's structure and substantive content.

The dissertation comprised seven chapters and an introduction. Chapters 1 and 2 reviewed the literature, presenting the theoretical background and the conceptual framework, respectively. Chapter 3 set out the scope, objectives, and hypotheses, serving as a bridge between the conceptual and empirical parts (I have some objections to its precise classification, which I return to in Section 3). Chapters 4–6 formed the methodological and empirical core — research methodology (Ch. 4), results (Ch. 5), and discussion (Ch. 6) — and Chapter 7 provided the conclusions, recommendations, and limitations.

The introduction contained all four key components — background, research problem, significance, and an outline of the dissertation — and I found it appropriate and sufficient.

Chapters 1 and 2 were closely related in function. In reviewing the literature, the candidate introduced the key concept of food waste — its definitions and categories — alongside numerous behavioural and economic theories (Theory of Planned Behaviour, Social Cognitive Theory, Practice Theory, Responsible Production/Consumption Theory, Household Production and Consumption, Circular Economy, and Economic Behaviour) and the broader conceptual context (the sustainable food system, household food waste management, food consumption management, the socio-demographic and economic determinants of food waste, household competencies and infrastructure, the cultural and religious context, and the specificity of young consumers at the early stage of family life). I found the positioning of food waste within the Sustainable Development Goals, the overview and operationalisation of the definitions used in the literature, the discussion of the difficulties involved in that operationalisation, and the detailed overview of the determinants of household food waste particularly valuable. This material also served as a useful introduction to the empirical model presented in Chapters 4 and 5, and demonstrated the PhD candidate's sound command of the relevant literature.

The structure of these two chapters, however, required clarification. Chapter 1, titled "Theoretical Background", mainly lists theories but reads more like a catalogue than a coherent framework. Chapter 2, titled "Conceptual Framework", presents a literature review on the SDGs, sustainable food systems, and culture, yet does not clearly develop a conceptual framework; instead, it functions as a further narrative-based literature review. The candidate should therefore have distinguished more clearly among the theoretical background, the literature review, and the conceptual framework, and explained how the selected theories and concepts were integrated into the analytical model (I address this in Section 3). In addition, the number of citations, the multiplicity of theories, and the terminology were at times somewhat overwhelming; a glossary of key terms — better placed in the introduction than on page 73 of Chapter 6 — together with a rigorous, systematic review method,

would have structured these chapters more effectively. This is a limitation in food waste research, where the evidence base is fragmented across household practices, consumer behaviour, food supply chain stages, prevention measures, policy instruments, sustainability assessment, and intervention effectiveness. Consequently, references are used selectively and descriptively rather than embedded in a reproducible review protocol (there are, however, clear omissions, which I will indicate in Section 4).

A rigorous systematic review would, at a minimum, require a clearly defined review question, databases, search strings, inclusion and exclusion criteria, a screening procedure, a quality appraisal, and a transparent synthesis strategy, preferably aligned with PRISMA guidelines (Page et al., 2021). PRISMA is particularly relevant here because it was designed to ensure that systematic reviews transparently report why the review was conducted, what was done, and what was found.

The methodological options available in food waste research are, after all, both considerable and well-established — several of them cited by the candidate. A review could take the form of a theory-based review focused on a single framework, such as Social Practice Theory in household food waste (Phung et al., 2026); a systematic review and meta-analysis of the Theory of Planned Behaviour in food-waste behaviour (Srivastava et al., 2023); a systematic review of household food-waste practices and their policy implications (Schanes et al., 2018); a bibliometric review of household food-waste behaviour (Pilone et al., 2023); a conceptual or framework-based review of food loss and waste in supply chains (Luo et al., 2021; Magalhaes et al., 2021); or a review focused on the evaluation of food-waste prevention measures (Goossens et al., 2019). These examples show that the problem is not a lack of available methodological models, but rather the absence of a justified and consistently applied review design. In such a case, the author could have adopted a review-of-reviews approach, explaining how existing systematic reviews were identified, appraised, and synthesised. Without such a strategy, the literature review remains closer to a selective overview than to a scientifically rigorous synthesis. Consequently, the thesis does not convincingly demonstrate whether the selected literature is comprehensive, unbiased or sufficient to support the claimed research gap.

A further reservation concerned the disproportionate treatment of the methodological section. Chapter 4 covered only six pages (pp. 93–99), whereas Chapter 2 spanned approximately 30 pages, creating an inverted structural proportion. This inconsistency may also explain why several important methodological details were missing or insufficiently developed. The dissertation would therefore have benefited from a more extensive methodological chapter; alternatively, combining Chapters 3 and 4 might have provided a clearer presentation of the research design, empirical procedures, measurement tools, and data analysis strategy.

Chapters 5–7 generally fulfilled their roles and presented the results, discussion, and conclusions coherently. Nevertheless, chapter 5 would have been stronger with a separate subsection on the qualitative results — particularly the main interview themes — and an integrated presentation of the quantitative and qualitative findings, for instance, as a joint display (I return to this in Section 3); this is especially important given the dissertation's declared mixed-methods character. Chapter 6, in turn, would have benefited from a more explicit discussion of the study's theoretical contribution, showing how the empirical findings extended, refined, or challenged earlier assumptions.

Overall, the candidate maintained coherent connections among the research topic, the conceptual framework, the empirical investigation, and the conclusions. However, the conceptual chapters underrepresented three of the four key components of the title: while the title accurately captured the scope of the empirical study, it only partially reflected the dissertation's content in its current

form. Addressing this imbalance would substantially strengthen the alignment between the title and the work's substantive content. I return to this point, with a broader structural critique, in the next section.

Finally, the lists of figures and tables, the appendix, and the references were correctly prepared, although the major omissions noted below should be taken into account.

3. General evaluation and issues for discussion

I found the dissertation topic very interesting and valuable, and the empirical research was conducted reliably.

However, apart from minor comments in section 4 of the review, my reading has raised four issues that concern me, and I would like to hear the PhD student's opinion and justification during the public defence.

3.1 Leading theory for PhD thesis, linking theory with empirical strategy

Chapter 1 introduces no fewer than seven distinct theoretical frameworks — Theory of Planned Behaviour, Social Cognitive Theory, Practice Theory, Responsible Production/Consumption Theory, Household Production and Consumption, Circular Economy, and Economic Behaviour — alongside the conceptualisation of food waste itself. However, none is clearly designated as the thesis's leading or integrating framework. As a result, the conceptual scaffolding feels fragmented: the reader is offered a broad survey of theories, but it remains unclear which genuinely guide the empirical model and the interpretation of the results, and how the remaining ones contribute to it. In my view, the work would benefit substantially from anchoring its conceptual framework in a single overarching approach.

In my opinion, using seven theories without thorough analysis (in some cases, in fewer than 1-2 pages) or genuine integration (I do not treat the diagrams on pages 48, 65 and partly 80 as such) is theoretically problematic. Theories in Chapter 1 are not just different; some rest on conflicting assumptions. The Theory of Planned Behaviour and Social Cognitive Theory explain behaviour mainly through individual intentions, attitudes, and self-efficacy. Practice Theory, by contrast, criticises this individual-focused view and sees behaviour as shaped by routines, social practices, material conditions, and skills. Household Production Theory offers another perspective, grounded in utility maximisation under time and resource constraints. If these theories are listed together without explaining how they relate to one another, it becomes unclear what theoretical foundation supports the empirical model.

Consequently, in my view a single, well-justified theoretical framework would be substantially stronger than the current seven-theory listing — and Sen's Capability Approach is a particularly strong candidate for this specific dissertation, both topically (food, household behaviour, developing-economy context) and structurally (it maps cleanly onto resources, competencies, and behaviours, which are precisely the categories the dissertation already works with — just without naming the umbrella) which provides an integrative lens capable of accommodating the economic, behavioural, social, and cultural dimensions that the Author currently distributes across multiple, only loosely connected theories.

CA already includes the key elements identified by the author in Figure 4, page 80: resources, household characteristics, skills and knowledge, social and cultural norms, material conditions, choices, and food-management outcomes. Instead of spreading these elements across several partly conflicting theories, CA offers one coherent framework. In fact, the thesis's research problem

integrates the aforementioned Capability Approach, particularly in the context of health, a highly significant topic within Sen's Capability Approach.

Below, I present several themes along with selected, but highly relevant literature, which largely covers the current landscape of selected theories in Chapter 1 :

- (a) Food security: Burchi & De Muro, 2012
- (b) Food justice: Drèze & Sen, 2002; Smith, 2016
- (c) Food education: Ueda, 2021
- (d) Food choice: Gombert et al., 2017
- (e) Food waste: Kusumowardani et al., 2022
- (f) Sustainability and ecology: Holland, 2008; Watene, 2013

In CA terms, income, food availability, and household infrastructure can be treated as resources; skills, composting knowledge, routines, gender roles, cultural and religious norms, and socio-demographic characteristics as both individual and social conversion factors; and actual food-management practices and food waste as achieved functionings. This logic can also be presented visually, as shown in Robeyns' capability approach diagrams (Robeyns, 2005, 2017).

This choice also has consequences for empirical strategy. The structural model in SEM is meant to represent a causal-theoretical structure, and the strength of the resulting inferences depends substantially on how well that structure is grounded in theory (Hair et al., 2022). Drawing constructs from seven different traditions without an integrating framework risks producing latent variables that look similar in name but differ in conceptual content — a long-standing source of discriminant validity concerns in structural equation modelling (Henseler et al., 2015). To be clear, this is not a critique of PLS-SEM as such: the method is explicitly designed to accommodate exploratory and multi-theoretical models, and in this sense, the empirical strategy employed in the dissertation is methodologically coherent. My concern is rather with the theoretical scaffolding behind the model, not with the statistical technique.

It is precisely here that the capability approach could add value. Robeyns (2017) conceptualises CA as an open-ended framework capable of accommodating more specific theories, which is exactly what is needed in this study: a theoretical architecture that gives meaning to the choice of constructs and paths while allowing complementary theories (such as TPB) to serve as supplementary lenses. Given Sen's direct work on food and deprivation (Sen, 1981) and CA's documented relevance for developing and emerging economies — including its explicit operationalisation for food security analysis (Burchi & De Muro, 2012) — CA would be especially suitable for the Indonesian context.

Moreover, the conceptual model on page 92 implicitly reproduces the structure of the capability approach (personal, social, and material conversion factors > functionings > capability outcomes), yet without naming it as such. Adopting CA as the integrating framework would provide the theoretical scaffolding the model currently lacks — without changing the empirical strategy — and would significantly strengthen the coherence of the work.

I would like to hear the PhD candidate's perspective on this matter — in particular, whether CA was considered at the design stage and, if so, what led to the decision to rely on the current combination of behavioural theories instead. Furthermore, I would like to understand the rationale behind the final choice of SEM for this study.

3.2 The Indonesian context could be better discussed

I have the impression that, perhaps as a consequence of the thesis structure I referred to above, the Indonesian context remains underdeveloped (the best description is on pages 74-76). The regional context influences not only the formulation of Hypotheses 8–12, but also practice theory-related hypotheses (Hypotheses 5–7) and socio-demographic hypotheses (Hypotheses 1–4). It may therefore function as a meta-variable throughout the entire process. For this reason, it warrants much more attention, especially given the extensive literature on this topic.

Here are selected, notable omissions:

Kusumowardani et al. (2022) directly connect the capability approach (the "circular capability framework") with food waste in the Indonesian context — making it highly relevant to this dissertation. The authors' related works on food waste in Indonesia are likewise not cited.

Diana et al. (2024a), a systematic review by the same authors, identifies three groups of determinants of household food waste in Southeast Asia (psychological factors, food quality and safety, and consumer behaviour across the consumption cycle), directly relevant to the dissertation's regional framing.

Diana et al. (2024b) provide a valuable empirical foundation for CA-informed analysis, operationalising both food security and food waste at the household level through direct measurement in Bogor Regency — the study's own region.

Damanik et al. (2024) apply an extended Theory of Planned Behaviour model to food waste reduction intention among young Indonesians, identifying religious knowledge as the strongest predictor — closely linking food waste to the Indonesian context and to a methodological approach comparable to the candidate's own.

Mulyo et al. (2021) is likely the single most directly relevant study, examining food waste among urban young families across four Indonesian cities along four dimensions of food consumption management — linking food waste directly to both the Indonesian context and family structure.

3.3 Limited data and instrument transparency

I want to raise several concerns about the documentation and transparency of the empirical material underpinning the dissertation, particularly the in-depth interview component. Given that the study employs a mixed-methods design — combining a face-to-face Likert-scale survey with in-depth interviews — the rigour of the work depends not only on the quality of the analysis itself, but also on the extent to which the data, instruments, and analytical procedures are made traceable and verifiable to the reader.

In my view, the study focuses primarily on the survey component, as I was unable to find substantive information on the in-depth interviews, nor any integration of the two strands. This is a significant concern, because if a dissertation employing a mixed-methods design does not include an integrated presentation of its findings — for instance, a joint display — then, by current methodological standards (Creswell & Plano Clark, 2018; Guetterman et al., 2015), it does not constitute integrated mixed-methods research, regardless of how robust the quantitative and qualitative components are individually.

Consequently, I cannot fully agree with the characterisation of the design as a mixed-methods approach. Mixed-methods research is particularly demanding in this respect, as it requires consistent documentation across two methodological traditions with different validity criteria (Creswell & Plano

Clark, 2018). In the current version of the dissertation, several elements that I would normally expect to find — either in the methodology chapter or in the appendices — appear to be either absent or only partially reported. I would appreciate the PhD candidate's response on this point.

In addition, the dissertation refers to "enumerators" on page 98 as participating in data collection, but does not specify how many individuals were involved. This omission is methodologically significant because the number of enumerators directly determines which quality-assurance procedures should have been applied. If multiple enumerators were involved, the dissertation should report (a) their exact number, (b) their training procedure, (c) the distribution of workload among them, and (d) some form of inter-enumerator reliability assessment — for example, whether independent enumerators administering the same instrument to comparable households produced consistent results. The use of the plural ("enumerators"), without further specification, is in itself a transparency concern: the reader cannot determine which set of methodological standards applied to the data collection process. Furthermore, given that the qualitative component is particularly sensitive to interviewer effects, rapport building, and probing depth, the absence of information about who conducted the interviews substantially limits the reader's ability to evaluate the trustworthiness of the qualitative findings.

3.4. Insufficient elaboration of research design

The methodological chapter suggests that the survey and in-depth interviews were selected somewhat selectively, without a sufficiently critical discussion of alternative approaches in household food waste research. The PhD candidate does not explain why a self-report questionnaire was preferred over other established methods, such as food waste diaries or waste composition analysis (direct measurement), despite the well-documented limitations of survey-based approaches — particularly social desirability bias and the systematic underreporting of food waste. Similarly, the choice of in-depth interviews is not justified relative to other qualitative or mixed-methods alternatives (e.g., focus groups, ethnographic observation, photo-elicitation, or kitchen diaries combined with follow-up interviews).

I would add that Section 5.2, in fact, refers to the amount of food waste (pp. 103–104), but the methodological section provides no information on this issue. Therefore, it is unclear whether the directly measured food waste data presented in Chapter 5.2 — amounts by product category — are incorporated into the model. Thus, this omission in methodological sections is particularly noteworthy because recent methodological literature explicitly recommends direct measurement or the triangulation of methods to enhance the validity of household food waste estimates (Wunderlich & Feldman, 2024). The dissertation does not engage with this recommendation and therefore misses an important methodological debate that bears directly on the study's design.

I would appreciate the PhD candidate's reflection on why a direct-measurement component was not incorporated into the study design, and whether the limitations of the chosen self-reported approach were considered at the design stage.

4. Minor Chapter-by-Chapter Comments

4.1 Detailed comments/observations/remarks on Chapter 1 are as follows:

- Chapter 1 combined a definitional subsection (1.1) with seven theoretical subsections. The structure would have been more transparent if the definitional content had either been expanded into a stand-alone introductory section preceding the theoretical subsections or integrated into the relevant parts of Chapter 2,

- Section 1.1 is very limited and, although the term *food waste* may seem fairly self-evident, given that it constitutes the main pillar of the thesis, it deserves a more developed discussion. This discussion should take into account definitional ambiguities, the distinction between avoidable and unavoidable food waste, the household-level dimension of the phenomenon, and methodological challenges in its measurement. This is particularly important because recent studies show that the quantification of household food waste remains methodologically inconsistent, with no uniformly accepted measurement approach, even in reviews of several dozen empirical studies (see: Wunderlich & Feldman, 2024),
- P.28-29, 32: Selected cited academic articles are not included in the reference list,
- Section 1.8 is clearly underdeveloped in terms of the literature review. It lacks key works from the field of behavioural economics (including Kahneman and Tversky), and the absence of any reference to the originators of the nudge concept, namely Thaler and Sunstein, represents a significant gap in the literature review. In addition, behavioural economics has emerged as one of the most productive theoretical lenses for understanding household food waste, with contributions ranging from systematic reviews of practices and drivers (Hebrok & Boks, 2017; Schanes et al., 2018) to empirical investigations of decision-making mechanisms (Bellemare et al., 2017) and critical assessments of intervention effectiveness (Stöckli et al., 2018),
- The chapter ends abruptly, with no concluding remarks or implications for the conceptual framework.

4.2 Detailed comments/observations/remarks on Chapter 2 are as follows:

- The chapter would have benefited from the inclusion of an additional subsection, for example, “3.3 Conceptual Model and Hypotheses”, with two further parts: “3.3.1 Diagram of Relationships” and “3.3.2 Hypotheses Derived from the Framework”. This would have allowed the diagrams currently presented on pages 65, 80, and 92 to be consolidated into a single leading conceptual model, clearly described and justified in this chapter. Such a solution would have strengthened the logical connection between the literature review, the conceptual framework and the empirical part of the dissertation,
- P.54-55, 70: Most of the cited academic articles are not included in the reference list,
- The first paragraph on page 58 should be moved to Section 2.5,
- Section 2.7, “Household Competencies and Skills, Material Infrastructure, and Knowledge of Composting Practices”, brought together three conceptually distinct components in a single subsection and could have been divided into separate subsections for greater clarity.
- Section 2.9 is clearly underdeveloped, especially given its importance for identifying and justifying the research gap,
- The chapter ends abruptly, with no concluding remarks or implications for the research design and methodology.

4.3 Detailed comments/observations/remarks on Chapters 3 and 4 are as follows:

Chapters 3-4 serve the same purpose, so I will briefly summarise them altogether.

- The methodological design should have included a much more detailed discussion of the research procedure, sampling strategy, questionnaire development, interview guide design and quality assurance procedures.
- The methodological chapter lacks information on enumerators, including their recruitment, training, and/or fieldwork organisation, which reduces the transparency of data collection.

- Pages 74–76 are the only pages where the research context of the study, namely the Bogor region, is discussed in more detail. As I indicate in another section, this is clearly insufficient, especially since this context shapes the structural factors that are so important in the author's SEM model and hypothesis 8-12.
- Repeating the discussion of Duvall's theory again is unnecessary, especially since it has already been addressed on page 77.
- The author mentions preliminary criteria for enumerators on page 93, but does not describe or present them in the thesis.
- On the positive side, the model is organised around a clear mediation structure, with Food Consumption Management as the central mediator linking three blocks of predictors to Sustainable Household Food Waste Management; it also incorporates culturally specific variables (e.g., Religion, Culture of Food Sharing) that are well-suited to the Indonesian context. However, the model also reveals several structural concerns that I have raised throughout this review:
 - First, the specification of paths is not fully theoretically justified: for example, Religion is modelled as influencing Food Consumption Management, although recent evidence (e.g. Damanik et al., 2024) identifies religious knowledge as the strongest direct predictor of waste-reduction intention, suggesting a possible misspecification.
 - Second, the model is exclusively quantitative: it contains no integration point with the qualitative component, reinforcing earlier concerns about mixed-methods integration.
- The author also states on page 93 that the enumerator explained the purpose of the study, but no template or exact wording is provided.
- Sample size and sampling method for the in-depth interviews are not specified. I was only able to find the phrase "a selected number of ..." on page 94.
- Absence of the full questionnaire. I was able to reconstruct it only partially, based on Tables 1, 2, and 3 and Appendices 2 and 3 for the quantitative instrument, and not at all for the qualitative one.
- Absence of information on translation procedures.

4.4 Detailed comments/observations/remarks on Chapter 5 are as follows:

- The directly measured food waste data (Chapter 5.2 — amounts by product category) is not incorporated into the model. The relationship between the latent construct "Sustainable Household Food Waste Management" and these direct measurements should have been clarified.
- It would be far more appropriate to describe the reasons for food waste by integrating survey data with in-depth interview data. Doing so would provide a comprehensive mixed-methods overview.
- The food waste analysis across the specified product categories on pages 106–119 (exceeding 13 pages) is substantially over-elaborated and redundant. Presenting a summary table that indicates the most frequent causes would have been sufficient. Furthermore, it is worth noting that the comprehensive SEM model analysis spans fewer than 8 pages.
- No analyses based on the in-depth interviews, nor is there even a description of the sample.
- Response rate is not reported.
- Near-complete absence of information on the in-depth interviews — including sample transcripts, interview duration, location, recording method, the analytical procedure used, software employed, the interview guide, and related details.

- The empirical chapter omitted a data-screening table reporting indicator-level descriptive statistics (means, standard deviations, skewness, kurtosis) and the treatment of missing values.

4.5 Detailed comments/observations/remarks on Chapters 6 and 7 are as follows:

Chapters 6-7 serve the same purpose, so I will briefly summarise them altogether.

- In the discussion, I miss a clear division into Discussion of quantitative findings and Discussion of qualitative findings, as well as a separate section devoted to Integration: meta-inferences. Even though there are statements such as *"the direct interviews reveal..."*, I cannot find these findings in the Results section or in the Annex.
- In its present form, this chapter 6 reads primarily as a comparison with prior literature, rather than both: a comparison with prior literature as well as a clear articulation of the study's theoretical contribution.
- The Conclusions chapter appears underdeveloped, as it omits two elements expected in a doctoral dissertation: an explicit statement of the original contribution (what new theoretical, methodological, and empirical knowledge the study adds) and a section on directions for future research following from the limitations. Both should be added so the chapter demonstrates the dissertation's novelty and situates it within an ongoing research agenda.
- The limitations and implications are treated superficially. The limitations remain generic, without addressing their consequences for the interpretation and generalisability of the results, and neither section is confronted with the existing literature — the chapter contains not a single citation. The implications thus read as the author's assertions rather than conclusions grounded in prior research. This section should engage explicitly with the relevant literature.

III. A final conclusion

The dissertation represents a substantial body of work and contains original and valuable scientific results. The results are mostly clearly presented, and their interpretation demonstrates a high scientific standard. Moreover, the selected topic is analysed using appropriate datasets and well-established empirical models. While the noted flaws are partly polemical (referring to the CA) and partly critical, the critical elements do not affect my final evaluation, which is favourable.

On this basis, I **conclude that the dissertation meets the requirements set for doctoral theses, and I recommend that it be admitted to the public defence.** Therefore, I hereby declare that the doctoral dissertation entitled **"Food Waste at the Early Stage of Family in Urban Area: A Case Study of Bogor City and Regency, West Java, Indonesia"**, written by **Silvia Dewi Sagita Andik**, meets the requirements for doctoral dissertations in the discipline of economics and finance, as set out in Article 187 of the Act of 20 July 2018 – Law on Higher Education and Science.

I recommend that the Council of the Discipline of Economics and Finance of the Warsaw University of Life Sciences admit Ms Silvia Dewi Sagita Andik to the public defence of her doctoral dissertation.

At the same time, I expect that the issues raised in Section 3 of this review — in particular those concerning the documentation of the qualitative component, the methodological justification, and the conceptual model — will be addressed and clarified by the PhD candidate during the defence.

IV. References

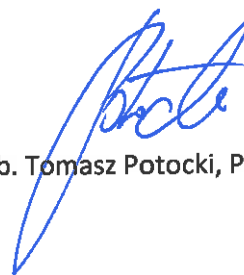
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Uniwersytet Rzeszowski
Wydział Ekonomii i Finansów
ul. Ćwiklińskiej 2, 35-601 Rzeszów
tel.: +48 17 872 16 04
e-mail: wef@ur.edu.pl

dr. hab. Tomasz Potocki, Prof. UR



Uniwersytet Rzeszowski
Wydział Ekonomii i Finansów
ul. Cwiklińskiej 2, 35-601 Rzeszów
tel.: +48 17 872 16 04
e-mail.: wef@ur.edu.pl



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OPŁATA POBRANA
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Umowa z Poczta Polska S.A.
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*Finco Obstęgi Now
Szkola Ottona Goszpera
Wielkiego w Warszawie
ul. Nowosyjska 166
02-787 Warszawa*