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# MEASURING WOMEN'S EMPOWERMENT IN AGRICULTURE WITH SURVEY-BASED AND EXPERIMENTAL ECONOMICS METHOD

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## PREFACE

The project “Measuring Women’s Empowerment in Agriculture with Survey-Based and Experimental Economics Method” was a result of joint cooperation and implementation between the Faculty of Agricultural Sciences and Food - Skopje and the United Nations Entity for Gender Equality and the Empowerment of Women (UN Women).

The *overall goal* of the project was to contribute to the empowerment of women in rural areas and their increased participation and leadership in the agricultural sector. The main *project outputs were*: (1) identification of the key determinants of disempowerment to be targeted in enhancement support programs, and (2) revision of the agriculture and rural development policy to better address gender inequalities.

To achieve the project goal, a behavioural and experimental economics framework was used to measure empowerment in five domains using the *Abbreviated - Women’s Empowerment in Agriculture Index*: Production, Resources, Income, Leadership and Time allocation (Alkire, et al. 2013). In addition, *Women’s Decision-making Power* was measured (Forsythe, et al. 1994; Engel 2011, Cochard, Couprie, & Hopfensitz, 2014) as novel approach to the methodology and further cross-analysed with the Abbreviated - Women’s Empowerment in Agriculture Index by its validation with an experimental economics game (Nacka, Drichoutis, & Nayga, 2019). Last but not least, *Gender sensitive analysis of the policy and the budgetary transfers in agriculture and rural development* was conducted.

The overall project evidence-based approach was considered as valuable approach in identification of the key determinants of the women’s disempowerment in agriculture and recommendations for improvement of the design and implementation of government policies and programs for agriculture and rural development to better access gender inequalities.

## GENERAL INTRODUCTION

In the past decade, the Republic of North Macedonia (RNM) has made significant efforts to advance gender equality through the creation of an enabling legislative framework, adoption of policies and establishment of institutional mechanisms at central and local level. The EU integration process and signing of key international legal instruments on women's human, political, economic, social and cultural rights have been important driving forces of those efforts.

To promote the equality between women and men as a concept and to meet the gender quality as a goal, governments integrates the gender perspective at every stage of the policy processes - design, adoption, implementation, monitoring and evaluation - this is so-called gender mainstreaming. As a result, the *gender responsive policy*, as a strategy for mitigation of gender inequality, and *gender responsive budgeting*, as a reflection of the political will in achieving gender equality was differentiated. This does not include only separate budgets for women, but an assessment of budgets in terms of gender equality in the allocation of funds, and greater transparency and accountability in relation to this issue.

RNM is a signatory of a dozen of United Nations and the Council of Europe documents pertaining to the human rights (Ministry of Labor and Social Policy, 2008), among which the UN Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), thus has made a commitment to advance the gender equality and empowerment in the country. CEDAW obliges state parties to take concrete steps to improve the status of women and end discrimination against women. The Convention specifically takes into account the problems rural women face and obliges state parties to provide adequate resources and adopt measures to support them.

Gender perspective in RNM is introduced with the Law on equal opportunities between women and men since 2006, but even more with its amendment from 2012 that formalize the requirement of central and local government to incorporate gender aspects in the strategic plans and budget. Hence, in 2012, the first *National Strategy for Equality and Non-discrimination (2012-2015)* and the *Strategy for Introducing Gender Responsive Budgeting in the Republic of Macedonia (2012-2017)* are adopted. Later, in 2013 and 2016 the *Strategy for Gender Equality (2013-2020)* and the *National Strategy for Equality and Non-discrimination (2016-2020)* are prepared and adopted.

As a central gender equality mechanism is the Department of equal opportunities within the Ministry of Labor and Social Policy. It produced a handbook and toolkit both for civil servants and civil society organizations to introduce or to monitor the concept of gender responsive budgeting. To monitor the adopted strategies for introduction of gender responsive budgeting, an Intersectoral consultation and advisory group on gender equality was established (UNWomen, n.a). Several line ministries, among which Ministry of Agriculture, Forestry and Water economy (MAFWE), were requested to perform a gender analysis on selected programs, to identify gender sensitive output indicators and produce the very first gender budget statements. The gender budget statement on the rural development statement has identified two indicators "increased number of women farmers in rural areas" and "increased number of women users of financial support". This

statement does not cover all documents and programs that support agriculture.

The agricultural sector is regulated with a dozen of laws and by-laws, but the Law of agriculture and rural development (LARD) (Official Gazette of RM, 49/2010) is the main legal framework determining the agricultural policy in North Macedonia. The financial support of agriculture and rural development is defined in few strategic and operative documents that are subject of analysis. The main institutions for planning and implementation of the policy are the MAFWE as the responsible institution for the planning, designing and monitoring of the policy and the related financial support; and the Paying Agency, or the Agency for Financial Support of Agriculture and Rural Development (AFSARD) as responsible for the implementation and control of these programs. Additional support is provided by the National Extension Agency (NEA), the public advisory service, which supplements the dissemination of information related to the implementation of the programs, and assists the beneficiaries in obtaining the support.

Mainstreaming gender and application of gender responsive budgeting to the sector of agriculture and rural development implies recognising that women and men have different needs and play different roles in agriculture and traditional gender norms can condition women in performing their roles. That conditioning is largely reflected in: food security and food availability for the rural households, agricultural production, securing additional sources of income for the household, social life of the rural community, etc.

Based on that, gender analysis in the field of agriculture requires thorough assessment of the quality of life of women in rural areas, specifically: the availability of basic infrastructure (water, electricity, roads, transport, telecommunications, housing quality, street lighting, garbage collection, etc.), access to public services (schools, kindergarten, clinic, social institution, pharmacy, shops, etc.), access to income, etc. It is particularly important in that context to identify the specific needs of women in less favourable areas: areas at higher altitudes, economically distressed areas, areas with specific natural obstacles for organizing economic activity, etc. Another critical issue to consider is the unpaid work which largely determines women's position in rural areas. This issue gets even more important in the agricultural sector, based on the role of women in production to maintain their own needs and informal employment in the sector<sup>1</sup>.

<sup>1</sup> Women are active in agricultural production but as household members usually receive no compensation for their work; they are not active in the market as men and do not have equal access to the household budget (UN Women, 2018)

## Review of terms and definitions on the topic

The *Gender equality: glossary of terms and concepts* published by UNICEF, 2017, describe the main terms and definitions on the topic, as following:

### **Empowerment**

“Refers to increasing the personal, political, social or economic strength of individuals and communities. Empowerment of women and girls concerns women and girls gaining power and control over their own lives. It involves awareness-raising, building self-confidence, expansion of choices, increased access to and control over resources and actions to transform the structures and institutions which reinforce and perpetuate gender discrimination and inequality.

The core of empowerment lies in the ability of a person to control their own destiny. This implies that to be empowered women and girls must not only have equal capabilities (such as education and health) and equal access to resources and opportunities (such as land and employment), but they must also have the agency to use these rights, capabilities, resources and opportunities to make strategic choices and decisions (such as is provided through leadership opportunities and participation in political institutions)”.

### **Gender**

“A social and cultural construct which distinguishes differences in the attributes of men and women, girls and boys, and accordingly refers to the roles and responsibilities of men and women. Gender-based roles and other attributes, therefore, change over time and vary with different cultural contexts. The concept of gender includes the expectations held about the characteristics, aptitudes and likely behaviours of both women and men (femininity and masculinity). This concept is useful in analysing how commonly shared practices legitimize discrepancies between sexes.”

### **Sex**

“Refers to the biological and physiological reality of being males or women”.

### **Gender analysis**

“A critical examination of how differences in gender roles, activities, needs, opportunities and rights/entitlements affect men, women, girls and boys in certain situations or contexts. Gender analysis examines the relationships between women and males and their access to and control of resources and the constraints they face relative to each other. A gender analysis should be integrated into the humanitarian needs assessment and in all sector assessments or situational analyses to ensure that gender-based injustices and inequalities are not exacerbated by humanitarian interventions and that when possible, greater equality and justice in gender relations are promoted”.

### **Gender equality**

“The concept that women and men, girls and boys have equal conditions,

treatment and opportunities for realizing their full potential, human rights and dignity, and for contributing to (and benefitting from) economic, social, cultural and political development. Gender equality is, therefore, the equal valuing by society of the similarities and the differences of men and women, and the roles they play. It is based on women and men being full partners in the home, community and society. Equality does not mean that women and men will become the same but that women's and men's rights, responsibilities and opportunities will not depend on whether they are born male or women.

Gender equality implies that the interests, needs and priorities of both women and men and girls and boys are taken into consideration, recognizing the diversity of different groups and that all human beings are free to develop their personal abilities and make choices without the limitations set by stereotypes and prejudices about gender roles. Gender equality is a matter of human rights and is considered a precondition for, and indicator of, sustainable people-centred development”.

### **Gender gap**

“Disproportionate difference between men and women and boys and girls, particularly as reflected in attainment of development goals, access to resources and levels of participation. A gender gap indicates gender inequality”.

### **Gender mainstreaming/integrating**

“A strategy to accelerate progress on women's and girls' rights and equality in relation to men and boys. This is the chosen approach of the United Nations system and international community toward implementation of women's and girls' rights, as a sub-set of human rights to which the United Nations dedicates itself. Gender equality is the goal. Gender mainstreaming is the process of assessing the implications for girls and boys and men and women of any planned action, including legislation, policies and programmes. It is a strategy for making girls' and women's, as well as boy's and men's, concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes so that girls and boys and women and men benefit equality, and inequality is not perpetuated”.

### **Gender parity**

“A numerical concept concerning relative equality in terms of numbers and proportions of men and women, girls and boys. Gender parity addresses the ratio of women-to-male values (or males-to-women, in certain cases) of a given indicator”.

### **Gender-responsive budgeting (GRB)**

“Government planning, programming and budgeting that contributes to the advancement of gender equality and the fulfilment of women's rights. It entails identifying and reflecting needed interventions to address gender gaps in sector and local government policies, plans and budgets. GRB also aims to analyse the gender-differentiated impact of revenue-raising policies and the allocation of domestic resources and Official Development Assistance”.



### **Gender-roles**

“Social and behavioural norms that, within a specific culture, are widely considered to be socially appropriate tasks assigned to men, women, boys and girls. Gender-specific roles are often conditioned by household structure, access to resources, specific impacts of the global economy, occurrence of conflict or disaster, and other locally relevant factors such as ecological conditions. These often determine the traditional responsibilities and tasks assigned to men, women, boys and girls. Gender-specific roles are often conditioned by household structure, access to resources, specific impacts of the global economy, occurrence of conflict or disaster, and other locally relevant factors such as ecological conditions”.

### **Gender-responsive programming and policies**

“Intentionally employing gender considerations to affect the design, implementation and results of programmes and policies. Gender-responsive programmes and policies reflect girls’ and women’s realities and needs, in components such as site selection, project staff, content, monitoring, etc. Gender-responsiveness means paying attention to the unique needs of women, valuing their perspectives, respecting their experiences, understanding developmental differences between girls and boys, women and men and ultimately empowering girls and women”.

### **Gender-sensitive programming and policies**

“Programmes and policies that are aware of and address gender differences”.

## PART I: RESEARCH BACKGROUND

Agriculture can be an important engine of growth and poverty reduction. It is perceived as a male-dominated sector but as an engine of growth and development, it should provide greater recognition of the importance of women (Alkire, et al. 2013). However, women, who are often a crucial resource in agriculture and the rural economy, face constraints that reduce their productivity and hinder their competitiveness in the sector. Gender inequality as an important issue for any society, is especially pronounced in the agricultural sector and rural areas in non-EU countries.

On the other hand, the importance of gender equality is highlighted in the EU policy. The EU approach to gender equality stands on three pillars (European Commission, 2016a): 1. Equal treatment legislation, 2. Gender mainstreaming and 3. Specific measures for the advancement of women.

In addition, the Regulation 1305/2013 of the European Union and of the Council that addresses gender issues within the policy field states:

*“Article 7 - Thematic sub-programmes: States may include within their rural development programmes thematic sub-programmes that address specific issues and are especially related to, inter alia, young farmers, small farmers, mountain areas, [...] and women in rural areas”.*

In line with EU Common Agricultural Policy (CAP), EU countries analyse the position of women in agriculture and rural areas on a mandatory basis and consider this result when designing rural development programs. With the implementation of this policy, the EU Rural Development Programme has become an effective tool for overcoming socially constructed and rigid gender roles that limit women's access to opportunities (Oedl-Wieser, 2014). Although EU countries exhibit significant differences, these efforts have resulted in a slow but stable increase of women farmers in agriculture (EC, 2017).

In RNM, the agricultural sector accounts for about 10% of the national gross domestic product and is the main driver of the rural economy. It employs 17% of the country's workforce, out of which one-third are women (SSO, 2017a). The majority of agricultural workers are men and they dominate all age groups and management activities. Women's participation in the management of agricultural holdings is very low, and the outlook is not positive, as it dropped from 11% in 2013 to 10% in 2016 (SSO, 2014 and 2017b). The low employment and participation of women in farm management indicate the limited inclusion of women in the decision-making process. Moreover, the patriarchal structure, local customs, cultural and traditional social norms add to the poor socio-economic conditions of women in rural areas (Risteska et al. 2012; Petrovska Mitrevska and Tuna 2017; World Bank and FAO 2014). The current situation reflects the need of new social and economic opportunities, essential to empowering rural women. The creation of new opportunities will likely shift the interest of rural women in agricultural work and prevent them from leaving rural areas (Petrovska Mitrevska and Tuna, 2017).

The national policy framework continuously adjusts in line with the country's preparation for European Union (EU) integration. The importance of gender

equality has been recognized by the national institutions and has become part of social and political priorities across different sectors. In addition, it is an issue addressed by current agricultural policy, but still, despite the presence of a legal framework, there is remarkable persistent inequity between men and women in rural societies (Hadzievski and Dzimrevska, 2017).

In the process of EU integration, RNM is working on adjusting its national agricultural policy towards the CAP. Given that the EU fosters agricultural and rural development policy, programs and practices supporting gender equality issues, it is expected that the Government of North Macedonia would also further address and prioritize women's empowerment in the national agricultural and rural development policy.

### General theoretical background on the topic

The linkage between women empowerment and economic development has led to intensive discussion of the issue of women's empowerment in the microeconomics literature (Bandiera 2014). This literature suggests four domains of empowerment—economic, social, political, and psychological (Fox & Romero, 2016)—in which the approach for developing policy measures for women's empowerment should be strongly correlated with the interdependence of economic and social empowerment and the subsequent use of economic and behavioural research approaches (Fox & Romero, 2016). Specifically, the use of behavioural economics has been an important component of this literature. Behavioural economics is a sub-discipline that complements the economics approach and basically connects psychology and economics to explore how individuals, households, and communities develop and alter their economic behaviour. This approach has been intensively used in experimental research as a novel approach for evidence-based research and policy implications.

The research “Measuring Women's Empowerment in Agriculture with Survey-Based and Experimental Economics Method” aimed to contribute to the empowerment of women in rural areas and their increased participation and leadership in the agricultural sector. By using a behavioural and experimental economics framework, we were able to measure the *Abbreviated - Women's Empowerment Index in Agriculture (A-WEIA)* and *Women's Decision-making Power* within the agricultural households (Forsythe, et al. 1994; Engel 2011, Cochard, Couprie, & Hopfensitz, 2014).

A-WEIA measures empowerment in five domains: Production, Resources, Income, Leadership and Time allocation (Alkire, et al. 2013). It is a standardized measure jointly developed by the United States Agency for International Development (USAID), the International Food Policy Research Institute, and the Oxford Poverty and Human Development Initiative.

Because the A-WEIA is a survey measure of stated actions and intentions, the A-WEIA methodology was complemented with a non-hypothetical measure that indicates the power balance between women and men within the household (a variant of the Dictator game that has been extensively used in the experimental economics literature) (Forsythe, Horowitz, Savin, & Sefton, 1994) (Engel, 2011) (Cochard, Couprie, & Hopfensitz, 2014). This methodology allows the assessment, in terms of money metric terms, of the level of women's empowerment in agriculture, in combination with women's power in decision

making within households and it is the first time this was applied in RNM. The methodology relies on behavioural and experimental economics methods, which are valuable tools to effectively improve the design and implementation of government policies and programs (Higgins et al. 2017).

Based on the proposed methodology by (Alkire, Meinzen-Dick, Peter Man, Quisumbing, Seymour, & Vaz, 2013), the key advantage of the original Women's Empowerment in Agriculture Index (WEIA) over other indexes is that it defines empowerment profiles for both women and men, measures intra-household inequality and reflects the inadequate agency at individual level. So far, these aspects have not been studied in NRM. Alkire, *et al.* (2013) highly recommends the WEIA as the most appropriate index for monitoring the development progress on gender equality. This is especially important in the development of agriculture and rural development policy since WEIA provides a multidimensional approach that is comparable over a time dimension and allows the monitoring of the the impact of agricultural intervention on women's empowerment. With the use of WEIA, Alkire (2005) recommends that most measures for empowerment be domain specific.

An abbreviated version of WEIA is A-WEAI which consists of five domains in agriculture: 1. Production (Input in productive decisions), 2. Resources (Ownership of assets and access to and decisions on credit), 3. Income (Control over use of income), 4. Leadership (Group membership), 5. Time (Workload). A-WEAI is a weighted average of one subindex that measures the five domains of empowerment (5DE) and the sub index of gender parity (GPI). By comparing these indices for women and men in agriculture, the A-WEAI can provide answer to the following questions: Are women more, less, or equally empowered compared to men? How large is the gap between the men's and women's disempowerment indexes? What is the level of decision making power within the household? What are the largest contributors to women's disempowerment? What are the largest contributors to men's disempowerment? What is the profile of a typical low empowered woman? In which agricultural domains women are more likely to be low empowered?

The methodology provides domain-specific measures of empowerment at the individual and household level and also at the region or country level that allow the identification of the critical points where further efforts for women's empowerment are needed (Alkire, Meinzen-Dick, Peter Man, Quisumbing, Seymour, & Vaz, 2013). Besides, the importance of the measurement of the A-WEIA can be stressed through its use as a diagnostic tool to signal key areas for interventions to increase women's empowerment and gender parity in agricultural sector in NRM. By analysing different domains, the crucial indicator/domain for particular development can be identified and better targeted by the national rural development programs and policy.

## Background on the empirical research

Considering the importance of the agricultural sector and women in agriculture, there is a lack of instruments for measuring the impact of agricultural intervention of women in agriculture (Alkire, Meinzen-Dick, Peter Man, Quisumbing, Seymour, & Vaz, 2013). What was missing at the national level is applied empirical research in measuring the level of gender empowerment, which will provide evidence-based results for the level of women's empowerment in agriculture and the

determinants of empowerment. This approach can be related to the different supportive programs for gender equality, including the national agricultural and rural development policy. This issue has been addressed so far in only a handful of studies in RNM given that most of the studies for gender equality are not related to the agricultural sector. Jakimovski and Matilov (2002) stressed that insufficient education is the reason why women have limited opportunities in agricultural activities, and these activities normally emerge as a consequence of social and economic necessity, not from their own choice. A study of perspectives of women in rural areas (Risteska, Lazarevski, & Mickovska-Raleva, 2012) gave a baseline of the status of rural women in NRM and described possible measures that could lead to empowerment of women in rural areas. The study on Land and Gender (World Bank & FAO, 2014), pointed out that according to the national law, women and men have equal status in relation to property, but local customs, cultural norms, and traditions often prevail over laws and so women may lose their entitlements to male relatives. Almas *et al.* (2015) explored effects on women's empowerment through gender specific money transfers from a national program that aimed to support women's bargaining position in the households in RNM. Petrovska Mitrevska and Tuna (2017) assessed the level of awareness of gender discrimination as relatively low in rural areas.

All the studies cited above do not quantify the level of empowerment nor do they link empowerment to a specific demographic profile of women. Considering that empowerment is a broad concept, for the purpose of this research, the social and economic aspects of women's empowerment in an applied economics study was addressed. A-WEAI was used to elicit and econometrically estimate a measure of women's empowerment, agency and inclusion of women in the agricultural sector in order to identify key determinants of empowerment that could be selectively targeted in any enhancement support program for the advancement of the status of the women in agriculture (Alkire, Meinzen-Dick, Peter Man, Quisumbing, Seymour, & Vaz, 2013). A-WEIA was complemented with a measure that indicates the power balance of women/men within the household. For this purpose, a modification of a popular game from the experimental economics literature was utilized, the Dictator game (Forsythe, Horowitz, Savin, & Sefton, 1994) (Engel, 2011), (Cochard, Couprie, & Hopfensitz, 2014) that allowed us to quantify in money metric terms the level of women power in decision making within the household. This money-metric measure is correlated with the A-WEIA which allows higher confidence in the conclusions about women's empowerment in agriculture to be drawn at both the individual and household level. Moreover, the developed agricultural index in correlation with money metric measures can serve as a baseline to compare women status and empowerment over time.

Following the general introduction and the background, in the next chapter, the methodological framework is presented in three stages of the research approach. The results and discussion are presented in four sections: the five domains in agriculture, the empirical research and A-WEAI, the experimental economics method, and gender sensitive policy analysis, followed by gender sensitive budget analysis. The last chapter concludes with recommendations for policy makers and further research.

## PART II: METHODOLOGICAL FRAMEWORK

### Research design

The research design was structured using a three-stage methodological approach based on quantitative (hypothetical validation), experimental (non-hypothetical validation) and analytical approach:

- **Stage I: Empirical research - Field survey on 464 agricultural households- data available to measure women's empowerment in agriculture (A-WEAI) and provide evidence on status and inclusion of women in the agricultural sector (hypothetical method)**
- **Stage II: Experimental economics method - modified "Dictator game" - to quantify the level of Women's Decision-making Power in each agricultural household (non-hypothetical method)**
- **Stage III: Gender-sensitive analysis of the policy and the budgetary transfers of the programs for support in agriculture and rural development**

### STAGE I: EMPIRICAL RESEARCH - FIELD SURVEY ON AGRICULTURAL HOUSEHOLDS

With the empirical research, the survey-based A-WEAI was measured. This approach follows a standardized measure jointly developed by the United States Agency for International Development (USAID), the International Food Policy Research Institute, and the Oxford Poverty and Human Development Initiative, adapted to the specific - country level (IFPRI, 2015).

A-WEAI is used to elicit and econometrically estimate a measure of women's empowerment, agency and inclusion of women in the agricultural sector in order to identify the key determinants of empowerment. The A-WEAI represents an aggregate index, and is reported at the country and regional level. It provides gender disaggregated data for domain-specific measures of empowerment at the individual and household level, but also at the aggregate level, for the identification of the critical points where further efforts should be aimed at (Malapit, Kovarik, Sproule, Meinzen-Dick, & Quisumbi, 2015).

#### *A-WEAI Data collection*

The data for A-WEAI were collected at the household and individual level by interviewing men and women within the same households. A field survey on 464 agricultural households was carried out in eight statistical regions of the country, in accordance to NUTS 3 classification. The survey was conducted in the period 20 June - 31 July 2018. Twenty experienced advisors for the National Extension Agency (NEA), who have had permanent cooperation with the agricultural

producers, were selected to perform the household interviews. Before the final questionnaires were developed and adopted on country-level specifics, a focus group interview was organized to pre-test the adequacy of the questionnaires. The focus group interview was organized in cooperation with the National Farmers' Federation. Nine women participated in the focus group interview.

The main criterion for selecting the regions and municipalities for the survey was the national NUTS nomenclature that provides a single and uniform breakdown of territorial units at the regional and local level. This nomenclature is the basis for collecting, processing and publishing regional statistics used for planning and running the regional policy in the RNM (State Statistical Office of RNM, 2018). The Nomenclature of Territorial Units for Statistics - NUTS consists of 5 levels: NUTS level 1 and NUTS level 2 represent the whole territory of the RNM as an administrative unit, NUTS level 3 consists of 8 non-administrative units - statistical regions that are formed by grouping the municipalities as administrative units of lower level. The regions were selected in accordance to NUTS level 3.

The selection of the agricultural households in the survey was based on a sample defined in a FADN system<sup>2</sup> selection plan for each region and the country. The aim was to get a representative sample in the following three dimensions: region, economic size and type of agricultural production. A unique feature of the FADN system is the collection of (sensitive) accounting data for the agricultural household. In RNM, the establishment and functioning of a national network of accounting data from agricultural holdings - FADN of North Macedonia is defined by the "Law on establishing a network for collecting accounting data from agricultural holdings" (Official Gazette of the Republic of Macedonia No. 110/07, 53/2011) - Law on FADN and "Rulebook on the methodology for calculating the standard output, as well as the manner of collecting data and information from the network, the methodology for determining the typology of agricultural holdings, the assignment of agricultural holdings by type of agricultural production and classes of economic size of agricultural holdings, the maximum number and minimum economic size of accounting holdings and the form and content of the sole form for determining the income and analysis of the business operations of agricultural holdings. Within the field of research for a network of accounting data from agricultural holdings, there is a great diversity of agriculture. In order to ensure that the FADN sample adequately reflects the diversity of the field of observation, the design of the sample was stratified by three stratification variables: region, economic size and type of agricultural holding, as defined by the regulations for a network of accounting data from agricultural holdings. Beside the FADN agricultural households, a representative number of non-FADN agricultural households were selected, in order to obtain additional diversity in the sample.

A-WEAL comprises of two sub-indexes. The first sub-index assesses the degree to which women are empowered in five domains of empowerment (5DE) in

<sup>2</sup> The Farm Accountancy Data Network (FADN) was established in 1965. FADN is a survey conducted in the member states of the European Union (EU). Every year, accounting data from over 100,000 agricultural holdings in the 27 EU Member States are collected. FADN is based on the application of the same accounting principles for the recording of data from economies in all EU Member States. However, the network does not cover all agricultural holdings in the Union, but only those whose size allows them to be defined as commercial holdings. The economies involved in FADN are randomly selected at the level of each region in the EU.

agriculture. These domains are (1) decisions about agricultural production, (2) access to and decision-making power about productive resources, (3) control of use of income, (4) leadership in the community, and (5) time allocation. This sub-index provides a multidimensional empowerment profile for each man and woman. It weighs 90% of the total A-WEAI.

**Table 1 The domains, indicators, and weights in the A-WEAI**

DOMAIN	INDICATOR	WEIGHT
Production	Input in productive decisions	1/5
Resources	Ownership of assets	1/15
	Access to and decisions on credit	2/15
Income	Control over use of income	1/5
Leadership	Group membership	1/5
Time	Workload	1/5

Source: Yount, VanderEnde, Dodell, & Cheong, 2015

The second sub-index (the Gender Parity Index [GPI]) measures gender parity within the households. GPI is a relative inequality measure that reflects the inequality in 5DE profiles between the primary adult male and women in each household. GPI measures the intra-household inequality and facilitates the analysis of households that lack gender parity. It weighs 10% of the total A-WEAI. For those households that have not achieved gender parity, GPI shows the empowerment gap that needs to be closed for women to reach the same level of empowerment as men. The total A-WEAI score is the weighted sum of the country level 5DE and GPI.

$$AWEAI = 90\% \times 5DE + 10\% \times GPI$$

#### *5DE Indicators and cut-offs for the A-WEAI*

For the A-WEAI, 5DE are measured using 6 indicators with their corresponding weights (Table 1). Each indicator is designed to measure whether each individual reached a certain threshold (has adequate achievement) with respect to each indicator.

The method for developing the A-WEAI relies on using the individual responses to the survey questions where each of the six indicators are assigned a value of 1 if the individual's achievement is adequate, i.e., it exceeds the defined inadequacy cut-off for the specific indicator, and value of 0 otherwise. At the beginning, an individual empowerment score for each woman (adequate achievement) was calculated. The individual empowerment score represents the



weighted average of each of these six indicators using the weights defined in the methodology. So, woman/man who has achieved “adequacy” in 80% or more of the weighed indicators is considered “empowered”. On the contrary, the person is disempowered if the inadequacy score is greater than 20%. Consequently, the households lack parity if the woman is disempowered and her inadequacy score is higher than the inadequacy score of her male counterpart. On the other side, household enjoys parity if the woman is empowered or her adequacy score is greater than or equal to that of the man in her household (Alkire, Meinzen-Dick, Peter Man, Quisumbing, Seymour, & Vaz, 2013).<sup>3</sup>

## **Descriptive analysis of five domains of women’s empowerment**

Different sources of data have been used for analysis of the five agricultural domains. A desk research of available literature and official statistical data provided an overview of each domain with emphasis on the position of women in each domain.

## **STAGE II: EXPERIMENTAL ECONOMICS METHOD**

A- WEIA was complemented with a measure that indicates the power balance of men/women within the household. For this purpose, a modification of a popular game from the experimental economics literature, the Dictator game was utilized (Forsythe, Horowitz, Savin, & Sefton, 1994) (Engel, 2011) (Cochard, Couprie, & Hopfensitz, 2014) that quantifies, in money metric terms, the level of women’s power in decision making within the household. This money-metric measure was correlated with the A-WEIA which allowed conclusions about women’s empowerment both at the level of agricultural related decision making as well as at the level of household decision making to be drawn.<sup>4</sup> From a methodological point of view, it is also very important to assess whether hypothetical and non-hypothetical measures of women empowerment converge and can potentially describe a similar profile of low-empowered women or whether the two measures can be used complementarily to each other.<sup>5</sup> The A-WEAI and the dictator game also allow us to pinpoint which regions of the country are in larger

<sup>3</sup> Detailed instructions for the methodology applied for calculation of A-WEAI is available at <http://weai.ifpri.info/versions/a-weai/>.

<sup>4</sup> In the dictator game, the first player, “the dictator”, determines how to split a cash prize between himself and another player. The dictator is at his own will to determine the split of money, which means that the recipient has no influence over the outcome of the game. In implementing this game, each woman in a household play the role of the dictator and decides how to split a certain amount of money between themselves and the husband/partner. In addition, each man in the household makes similar decisions about how to split a certain amount of money between themselves and the wife/partner. The game is repeated when in isolation and when the husband/wife can decide jointly. Any differences between repetitions of the game can be attributed to the male power over decision making or, conversely, to the low level of women power in decision making within the household.

<sup>5</sup> The term “hypothetical” is used to describe measures or methods that involve evaluating answers or actions that are not revealed from subjects’ actions but are rather stated as intentions on actions. Conversely, the term “non-hypothetical” is used to describe measures or methods that involve subjects revealing their actions in incentivized with real money tasks where actions can incur monetary gains or monetary losses.

need of an intervention. From a policy implication perspective, the A-WEAI and its correlation with a money metric measure can serve as a baseline to compare women status and empowerment over time.



During the survey, the participants from the agricultural households were interviewed with one individual questionnaire and one questionnaire for the household. In addition, a lab-in-the-field experiment was conducted at the end of the survey. Each of the participants played an allocation (i.e., modified Dictator) game where:

- Couples from 462 agricultural households were asked to allocate a sum of money between them and their partner. They were given 7 different choice sets and were asked to make a choice for each one (picture 2). They first had to perform this task isolated from each other, while in another set of decisions they had to decide jointly with their partner.
- Couples had to choose between an equal divide of a smaller amount of money inefficient for the household - max. 400 MKD (see option A, picture 2) or a larger sum of money but which involves an unequal division but efficient for the household - max 600 MKD (see option B, picture 2). Therefore, their decision is a micro-scale simulation i of decisions that involve a trade-off between self-interested individuals and a unitary household.
- By observing how couples vary their behaviour between the isolated and joint mode, some inferences about decision making power in the household can be made.
- The behaviour was also related to the A-WEAI, to see whether behaviour in the experimental game is moderated by the level of empowerment of women.

Table 2 Distribution task/Allocation game

OPTION A		OPTION B		OPTION A		OPTION B	
CHOICE	SELF	OTHER	SELF	OTHER	SELF	OTHER	OTHER
1	200	200	50	550			
2	200	200	100	500			
3	200	200	200	400			
4	200	200	300	300			
5	200	200	400	200			
6	200	200	500	100			
7	200	200	550	50			

	
My partner 200 MKD	Me 200 MKD
<input type="checkbox"/> I choose option A	<input type="checkbox"/> I choose option B

## Data analysis methods

In order to correlate the behaviour in the experimental game with values of the indexes 5DE, AWEAI and GPI, random effects probit regressions were run where the dependent variable is whether a subject makes an inefficient allocation decision (chooses option A in a row of Table 1) or an efficient one (chooses option B). The basic specification uses dummies for the mode of the decision environment (woman decides alone, man decides alone, couple makes joint decisions), the money that the more efficient option (option B) allocates to the women (in units of 100 denars), and the value of the index elicited through the survey questions. Because, it is likely that these three basic sets of variables affect the probability of choice non-linearly, the basic setup contains all two-way and three-way interaction terms of these basic variables. Information critical values (i.e., Akaike's Information Criteria) are always in favor of the model with the interaction terms, so we base our findings on this model.

### STAGE III:

## GENDER-SENSITIVE ANALYSIS OF THE POLICY AND THE BUDGETARY TRANSFERS: ANALYSIS OF THE PROGRAMS FOR SUPPORT IN AGRICULTURE AND RURAL DEVELOPMENT

As a general tool for gender analysis the 4R method was used<sup>6</sup>, answering the question: *Who* (Representation) receives *what* (Resources), on *which terms* (Realia) and *How much* (Realization)?. The question 'Who' focuses on the women and 'What' refers to the given opportunities in the policy documents and the budgets. The terms are defined in the criteria in documents and procedures, whereas the 'how much' is its practical realization. Hence, the analysis is based on qualitative analysis of selected documents and quantitative analysis of the budget transfers.

The gender sensitive analysis of relevant documents covers the main legal, strategic and operative documents that define the developmental goals and regulate the financial support in agriculture, such as: the Law of agriculture and rural development (2010, and its amendments), the National Strategy for Agricultural and Rural Development (NSARD 2014-2020), the EU Instrument for pre-accession for rural development (IPARD) programs (2007-2013 and 2014-2020), the National Programs for Agricultural and Rural Development (2013-2017 and 2018-2022), and the annual Programs for financial support of agriculture (for the period 2013-2018), and the annual Programs for financial support of rural development (for the same period).

Gender disaggregated budget transfers are based on gender-disaggregated data from the Agency for financial support of agriculture and rural development (AFSARD): the number of submitted and approved applications, as well as the value of approved and paid application for the period 2013-2017 (direct payments) and 2015-2017 (rural development), and aggregately for the whole IPARD I program (2013-2017). The data are split by gender, but are aggregated at the program level. Unavailability of some information on the related measures<sup>7</sup> limits the analysis on this issue.

<sup>6</sup> (<https://eige.europa.eu/gender-mainstreaming/methods-and-tools/sweden/3r-4r>),

<sup>7</sup> The 'unavailability' here implies on not receiving this information on our request.

## PART III: RESULTS AND DISCUSSION

### Descriptive analysis of five domains of women's empowerment in agriculture

Rural women play an important role for the growth of the agricultural production. However, they often face obstacles and economic constraints limiting their inclusion in agriculture. In this context there is an evident gender inequality; i.e. there are women who often bear the responsibility for meeting the family needs but they frequently lack resources, information or even freedom in fulfilling this responsibility. Rural women often face barriers for achieving their full potential, given restrictive cultural practices, laws, and segmented labour markets. Therefore, eliminating gender inequality and empowering women could increase agricultural productivity, which could enhance empowerment of women in rural areas who could contribute to the development of the entire community.

In order to overcome the gender-based differences in the agricultural sector, one should look at the interactions between women and men in the same household in regard to agricultural production. However, the pure allocation of duties is very important in overcoming the possible gender-based constraints. A woman who is empowered to make decisions regarding the agricultural production structure will be more productive in agriculture (FAO, 2011). On the other hand, asset ownership also plays an important role in the process of women's empowerment. Asset ownership and decision-making within households often involve elements of both individual and joint control. When closing the gender gap in asset ownership by allowing women to own and control productive assets, it will lead to an increase of their productivity and also their self-confidence (Ogunnaike *et al.*, 2017).

Various studies have focused on the women's empowerment issue; according to Kabeer (1999) the term "power" is connected with the ability to make choices, i.e., to decide about making choices. Therefore, 'empowerment' is defined as a process of change where those who have been denied the ability to make choices acquire such an ability. Kabeer (1999) also points out that different choices have different impact, so therefore she describes two levels of choices: strategic life choices with direct impact on people's life and other with less consequences for other people. In her definition, the ability to exercise choice encompasses three dimensions: (i) resources - which form the conditions under which choices are made, (ii) agency - which is at the heart of the process by which choices are made, and (iii) achievements - which are the outcomes of choices.

At the same time, significant effort towards measuring the women empowerment has been put by the US Government's Feed the Future Initiative in 2012, in development of Women's Empowerment in Agriculture Index (WEAI).

## Domain I: Production – inputs in productive decisions

North Macedonia is traditionally characterized as an agricultural country, with around 44% of the population (985,000 inhabitants) living in the rural areas (SSO, 2002). The rural population is mostly populated in Polog, the Southeast and Southwest region of RNM. According to the Farm Structure Survey data, there are 178.125 agricultural holdings in the RNM. The farmers in the country are small-scale farmers and 60.8% of the farmers use agricultural area up to 1 ha. The average agricultural area used by the farmers is 1.8 ha of with 2.1 LSU (livestock units) per agricultural holding. This puts farmers and people living in the rural areas for which agriculture is the primary or only income, in a relatively unfavourable position (i.e., in terms of inability for efficient use of the production factors - low factor productivity (including labour), the lowest salaries and pensions in the country, lack of social capital and lack of trust, reflected in the small interest for organized activities of small-scale farmers through cooperatives).

**Employment** - In 2016, 62.8% of the employed people in agriculture, forestry and fishing were men (including seasonal workers). Besides the fact that women are not registered in the agricultural labor force pool, women are also the major group in terms of unpaid work and informal workers, engaged mostly as unpaid family workers or seasonal agricultural workers (double number compared to men) (LFS, 2012). As unemployed with no employment opportunities, unpaid workers in the family or low-paid seasonal agricultural workers, women in rural areas are becoming increasingly vulnerable. Even when they are paid, they only earn 33% of what men earn in the same sector. According to official statistics, more men participate in formal employment. Because of the unfavourable position of women in the labour force, young women in rural areas are no longer interested in spending their future in farming, and are willing to stay in the rural areas only if they are able to get employment other than agriculture (Tuna and Petrovska-Mitrevska, 2017).

Women express lower unemployment rates on the labour market, with more drastic differences in this rate in the rural areas of the country (Table 3). Similar gender discrepancies in the rural areas are seen in terms of the economic status of the worker. Namely, employee status of men is twice higher than the rate reported for woman in the rural areas. Also, men have employer and own-account worker position almost four times more than women. On the other hand, women are only showing higher percentages in the category “Unpaid family worker” in the rural areas, which is not the case in the urban areas (Table 3). Around 20% of the active women in the rural areas are working on their family properties without financial compensation, and very few are formally registered as agricultural producers (CRPM, 2012).

Table 3 Activity rate, employment and unemployment rates by gender and urban/rural region

In %			Urban		Rural	
2016	Women	Men	Women	Men	Women	Men
Activity rate	23	39.2	48.7	67.2	37.4	71.5
Employment rate	11.8	20.4	37.6	51.1	29.0	53.5
Unemployment rate	48.8	47.9				
By economic status			Women	Men	Women	Men
Employee			38.8	46	21.7	42.3
Employer			1.5	3.8	0.5	2.7
Own-account worker			1.8	6.2	4.0	16.1
Unpaid family worker			1.1	0.8	7.8	5.0

Source: LFS, 2017

**Education** - Although the population of NRM has high 95% literacy, less than 25% of the poor in the country have gained education higher than primary school level. Those who do not education at all or have only incomplete elementary education are women (over-representation of women in this group - 73% of the illiterate or people without education) (Tuna and Petrovska-Mitrevska, 2017). Around 12% of the rural population in RNM is without any education, over 42% have primary education and only about 38% finished secondary education. Students' transfer from primary to secondary education reflects a decreasing percentage of women from 49% in 2014/2015 to 46% in 2016/2017 who did not continue their education. On opposite, increasing trend in the students' transfer from secondary education to tertiary education from 47% in 2014/2015 to 57% in 2016/2017 is evident, showing that women tend to continue their education if they enrol secondary education. A higher percentage of women than men also leave school early without finishing their degree (SSO, 2017).

*Farmers' Statement: "The diversification of the economic activities in the rural areas to be more directed to women and their regular activities".*

Women are often responsible for producing value added products on the farm, but they cannot sell agricultural processed products. Such an opportunity, will bring diversification of the family income, and thus improve the living standard, as described in the IPARD program. Many studies show that on-farm activities are quite gender specific (Shortall, 2010); typical man activities include machinery maintenance and fieldwork, while farm bookkeeping, milking and activities such as harvest and fruit picking are typically.

## Domain II: Resources – Ownership of Assets and Access to and Decisions on Credits

**Infrastructure** – The rural population faces underdeveloped infrastructure and limited supply of public services in all of the rural regions. There are differences in the type of limitations and needs of rural population depending on the type of village. Mountain villages lack: social welfare centres (91%), cultural institutions (90%), health care (88.6%), high schools (87%) courts (85.5%); community centers (68.7%) and primary schools and shops, whereas the villages located at a lower altitude have better access to services and infrastructure, most notably access to health services. Residents of these villages mostly indicate lack of cultural institutions (68%) and judicial institutions (67%), followed by the need for secondary schools (58%), centers for social care (57%) and community centers (45%). In general, the problems of the rural population can be grouped in the following groups: the road infrastructure (24.3) and improvement of the water supply and electricity (15.8%), followed by education (5.0%) and health care (4.7%) (Jakimovski, 2004).

These factors, complemented by the traditional values that are dominant in the rural population, put women from rural areas in a difficult and extremely disadvantageous position, primarily by limiting their movement, access to information and availabilities for personal development. Women in rural areas are limited in their mobility, primarily because of the distance of existing services, but their limitations are also connected to limitations such as a driver license. Women in rural areas are often unable to access health services because of the distance of the major health facilities and dysfunctional dispersion of the health services in the rural areas.

Lack of **childcare services** is often seen as another limitation for women in rural areas to seek for employment. Almost 90% of the mountain villages and 70% of the villages in the valleys lack child-care services. Reaching the closest day-care requires more than 1.5 hours walk, and this is why households in rural areas rarely use day-care services. For example, the percentage of children aged 0-7 years, attending day-care in the rural areas in Polog is 2.5%, Southeast region – 6.5%, and the State average is 12%. The latest statistics of the State Statistical Office show high disproportion in the dispersion of kindergartens, with 41 of the 99 institutions for care and education of children in RNM situated in Skopje, and the rest dispersed all through the country (ICEC, 2017). The limited offer of public services, limit women to achieve their economic independence and empowerment. Additionally, the Employment Agency offices are often remotely positioned and as such become less accessible or not available at all for them to seek information about new job opportunities or available trainings (CRPM, 2012).

**Asset ownership** - Patriarchal structures and traditional social norms are still present and are reflected in the low employment rate of women but also in the minimal share of women in the property ownership structure, especially evident in the rural areas. In relation to property ownership, men have control over majority of the family property. In nearly 80% of the rural families, the husband or the husbands' father owns the family house, and in 62% of the cases they are also the owners of the arable land. Only 5% of surveyed households reported that a woman has the right of ownership of the house and this percentage was

higher than all other types of resources (CRPM, 2012).

In terms of property inheritance the dominant tradition is for men to inherit the entire property. This is especially the case in the rural areas where agriculture is the dominant activity of the households. Rarely women, mostly widows, have some property in their name. It is also worrying that most of the women in rural areas do not see anything discriminating in this tradition, accepting the situation and following this custom without further objections. The main logic behind this reasoning is that if the woman inherits property they will transfer this inheritance in another house when married and it will not remain in the family. The tradition obliges the woman, even when offered a share of the property, to not accept it in order to preserve the family values. However, the impression is that the traditions concerning the right of inheritance gradually change in North Macedonia (Tuna and Petrovska-Mitrevska, 2017).

**Access to capital** - Currently the lack of initial capital is a significant barrier to the development of sustainable businesses in rural areas in particular. Agricultural credits are particularly important in reducing the financial constraints of agricultural holdings and the agribusiness. Therefore, it is crucial to advance their short-term financial strength and capacity to invest in order to increase their productivity, modernization, access to up-to-date technologies and ultimately increase their competitiveness. Due to the specifics of agricultural production, crediting in agriculture, agribusiness and rural areas primarily serves to compensate for the limited opportunities of these entities to use their equity for financial purposes, but also to buffer the capital risks related to the agricultural production (high uncertainty regarding the level of expected yield, uncertainty in the realized price and value of production, as well as the time lag specific for the primary production) (NKEU-MK, 2018).

Agricultural programs are open to all women submitting requests; however, men farmers continue to appear as more frequent beneficiaries of institutional and financial support. However, women are interested in progressing in the field of agriculture. The investment or crediting opportunities for the rural population or more specifically the population involved in the agricultural production, are very limited and are mostly provided by commercial banks (30% through trade credits – seeds, fertilizers etc.); the rest 30% belong to governmental support programmes. In addition to the slightly improved rural financial services, the supply of financial assets for financing investments in agriculture does not satisfy the current demand. The financial institutions still consider agriculture as a high-risk sector. On one hand, financial institutions do not have appropriate experience for a proper analysis of the farm financial result, as well as for the risk assessment to repay the investment. On the other hand, they face high administrative costs to process the credit demands which refer to small amounts. The majority of women farmers (65%) have never applied for institutional and financial support for their agricultural activities, while 67% of men farmers submitted a request. The main reason is the failure to meet the requirements to qualify as applicants on request (CRPM, 2012).



*Farmers' Statement: "Only 5% of the property is owned by women". Led by traditional beliefs and values, women accept that the property belongs to her husband or her brother. But without ownership of some property, she cannot apply for a loan or start any entrepreneurial initiative.*

### **Domain III: Income**

The structure of incomes in 2017 was dominated by revenues from regular and irregular work with 66.8%, pensions 18.5%, revenues from agriculture with 6.2%, revenues from abroad 2.2%, and social benefits with 1.6% .

According to a survey by the Center for Research and Policy Making (2011), the average living standards of the rural families was 5,424 MKD/month (88 EUR), compared to 25,771 MKD/month (420 EUR) earned by the population living and working in the cities. The agricultural sector is traditionally characterized by the lowest salaries in the country, which in 2017 amounted to 16,740 MKD (around 270 EUR) (SSO, 2017). The lowest pensions are also typical for the agricultural sector. The minimal pension received by farmers was 3,744 MKD. The changes in the remittances inflow show large fluctuations over the years, however they present a significant part of the GDP (2.8% -2002; 4.2% - 2007; 4.1% - 2012) (World Development Indicators, 2017). In total, 77% of employees in Macedonian agriculture have the economic status known as full or part-time "unpaid family workers"(LFS, 2012). Given the low participation rate of women, the gender gap in employment is still significant, with women participating in formal employment (42%) compared to that of men (62%). Also, a relatively small percentage of women are recipients of social cash benefits (i.e. 26-27% in 2015/2016).

*Farmers' Statement: "Diversification of family income", or "Women to co-sign the contracts in rural development programs". When applying for the rural development measures, where farmers co-finance the investment, signature from both spouses to be required.*

### **Domain IV: Leadership**

**Women in institutions** - Regarding equality between women and men, the Strategy for Equality and Non-Discrimination 2016-2020 was adopted in June 2016, but little was done to effectively promote gender equality. North Macedonia's efforts in the past years to intensify women's involvement show a positive shift, but the results indicate that there is still room to work on this issue. After the adoption of the Electoral Code in 2006, the number of parliamentary seats at the national level reached a critical figure of 30%, although the recommendation of the Council of Europe was to increase the representation to 40%. It should be noted that thanks to the increased number of women in the highest representative body, a number of issues were discussed and revised in relation to gender equality.

**The voice of the rural woman** - The degree of awareness of gender discrimination is relatively low in rural areas, which hinders the realization of other activities related to gender equality, such as equal representation in politics, the economy

and equal participation in society and home. The rural woman is an important and largely deprived group of the population in terms of power and voice. In most instances rural woman is not aware of her rights and do not see anything discriminating in this traditional discrimination.

Women in rural areas are rarely consulted regarding public issues. They are most likely to leave villages unless new economic opportunities and employment opportunities are offered. This is very important for agriculture, as one of the basic rural activities which could improve the status of women farmers as well as to motivate them to constantly participate in the agricultural activity.

**Women in agricultural associations** – women involved in agriculture are increasingly participating in agricultural associations and co-operatives. The National Federation of Farmers integrates 105 women which are engaged in the associations' activities through different activities and through the informal Network of Women Farmers. In the last years, this association was actively involved in projects with the aim of improving gender equality. As a result three women are part of the management board, a women representative is deputy chairman of the association assembly, and for the first time from the existence of the National Federation of Farmers, a woman is appointed as the president and leading person. But, National Federation of Farmers is rare example of such dedicated association in promoting gender equality on different levels, institutional and local. What lack in the general picture, is the dedication of other association to work more actively in improving the gender inequality present in the rural areas and to increase women's active participation in associations and their managerial boards.

*Farmers' Statement: "We are members of associations but do not participate actively".*

*They often have the feeling that they are only invited to attend the training and event. Although they are members of civil society organizations, they still do not feel the affiliation and the power to act. They are without self-esteem, with a lost feeling that something can change. Informal organizations or rural women, as self-help- groups, can support active participation of all members in speaking the needs of the women and of the community. Women do not require formal education, since the highly educated leave the village (statement). They require informal and vocational education, so they can feel empowered in certain aspects, and can improve their technical and entrepreneurial skill, as well their engagement in value chains. All those aspects, but also the benefits from cooperation and diversification are important for the both spouses.*

## Domain V: Time (workload)

Women have great difficulties entering the labour market. The burden of family and household obligations put on most of the women in the rural areas, is often excluding them from the economic life, thus 64% of rural women are characterized as "officially inactive" (CRPM, 2012). This is especially the case for young women in rural areas aged 20-24 years (59%) and 25 - 29 years (43%) which are faced with the highest unemployment rate. The main reason for such trend is mostly due to the obligations traditionally posed on women (to be spouses and mothers), as well as the unpaid domestic work they perform

on daily basis. Additionally, there are more specific, ethnic differences among women in rural areas, with half of the Macedonia women are more economically independent. This is the case with one quarter of Albanian women, and women with Turkish ethnic community do not even earn and are completely financially dependent. This pattern seem to show that the degree of the traditional perception where the husband is the main source of income for the rural family depends on the ethnic background of the families in North Macedonia (CRPM, 2012).

Approximately 64% of women in rural areas are officially characterized as inactive. According to the survey, the most common reason for the characterization of rural women are the household and childcare responsibilities. Close to 47% of the unemployed women are actively working for example, on family farm (crafts or working some job for others), but their work is mostly unpaid (CRPM, 2012).

The “Time use survey 2014/2015”, conducted by the State Statistical Office of the RNM in the period from May 2014 to April 2015, shows that the working day (including both domestic activities and employment), lasts longer for women i.e. 5 hours and 36 minutes, than it does for men - 4 hours and 13 minutes. Unfortunately, the ratio of the percentage of work done with economic compensation differs and amounts 1 hour and 44 minutes more in favour of men. This fact allows men to make more profit and improve their status. The data show that women in rural areas dedicate most of their time, 4 hours and 22 minutes to domestic, unpaid activities, while only 1 hour and 18 minutes per day of activity is devoted to activities comprising financial compensation (TUS, 2015). The unpaid work of rural women is thought to be one of the main reasons for their economic dependence. The work done by women in their homes has indirect effects on the welfare of society which is directly dependent on this unpaid work of women. This includes activities such as care for the children, elderly and sick family members. However, this devotion of women to their families, limits women’s time for efficient engagement in revenue-generating employment and in many developing countries this situation results in acute poverty of women (CRPM, 2012).

*Farmers’ Statement: “Women are overloaded with many obligations”. Families are often multi-generational, thus women need to take care of children and the elderly, preparing home-made bread and milk, and participate on the work in the farm. It is necessary to make certain changes to unload some duties. The participants suggested farmer cooperation in child-day care or joint kitchens organized in the period of increased workload. The applications of such solutions are burdened by the regulations, rulebooks and standards. This does not mean that these solutions are not suitable, but that they need to be supported in this process, following the interdisciplinary approach.*

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## STAGE I: SOCIO-ECONOMIC CHARACTERISTICS OF THE SAMPLE

### *Sample description*

The average household size includes 3.7 total members while the mean number of women-over-men ratio is 1.16. Compared to the official data from the latest Census of Agriculture (SSO, 2007), the average number of members in one agricultural household was 2.4 referring only to economically active population excluding children, older, retired, inactive members etc. The average age of the women is 47.5 years old, where women with less than 40 years old participate with 28.57%. The average age of the men is 51.6 years old where men with less than 40 years old participate with 17.32%. The survey results showed that men are slightly more educated than women.

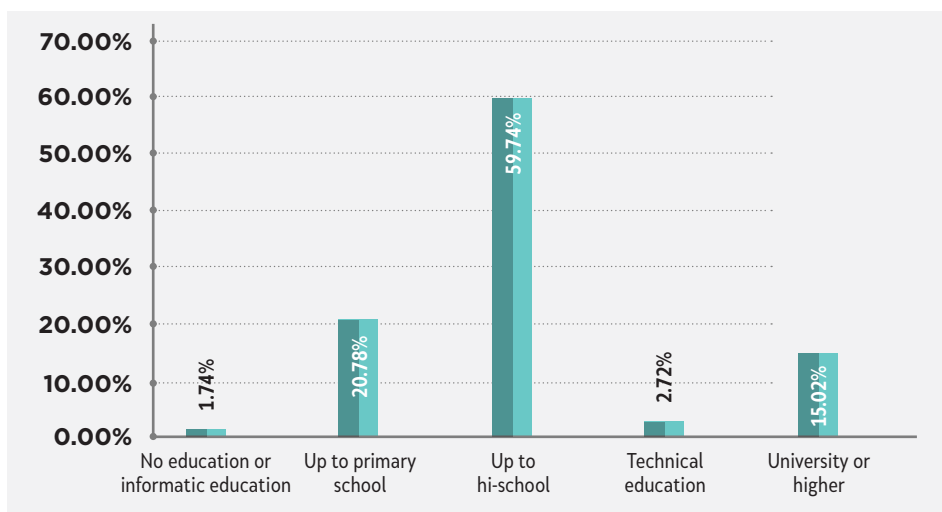


Figure 1 Description of the sample education

### *Decision making*

Men have higher participation in the decision-making process as compared to women. The results showed that although it seems that women have high power in decision-making process in the agricultural production related activities and have a good control over the income, still the opportunities are not equal for the women. When the activities are related to earning income, then men higher participation in decision-making, is evident. In particular, the domain Production - Input in productive decisions shows the following results:

- 94.6% of men and 86.96% of women make decisions with high or medium degree of individuality for crop and/or animal production aimed for Self-consumption for household purposes.

- 97.0% of men and 80.1% of women make decisions with high or medium degree of individuality in regard to crop and/or animal production for Income, primary for the market.
- Only 5% of men and 4.5% of women bring by themselves decisions on crop and/or animal production for Self-consumption for household purposes.
- 15.3% of men and 10.8% of women make production decisions aimed for Income generation by themselves exclusively.
- 94.1% of men and 89.7% of women have contribution in some or most decisions on production activities for Household consumption.

In the domain Income -Control over use of income:

- 93.5% of men and 90.0% of women have contribution in some or most decisions for Income distribution for household purposes.
- 97.2% of men and 86.9% of women have contribution in some or most of decisions on Income distribution that is generated from income generating activities.
- 79.0% of men and 69.5% of women contribute in some or most decisions for Income distribution obtained from another job or daily salary.
- 81.8% of men and 60% of women sample contribute in most decisions for Income distribution obtained from non-agricultural activities.
- 90.9% of men and 78.6% of women make individual decisions with a medium or high degree contribution for non-agricultural activities.

In the domain Access to credit:

- None of the women makes decisions alone for how to use the credit assets issued by the saving house, but 7.97% believe they are included in the decision making with the husband. Besides, 47.4% of women expressed that they perceive themselves as eligible to use credit from banks, and 47.6% that perceive they are not eligible. This shows an equal distribution among women in regards to their eligibility to apply for a bank loan. However, the median value is in favour to those who are not creditworthy. In comparison with men, women are less eligible for bank loan. Only 17.9% of the women respondents (considering that 45.04% did not answer this question) receive a bank loan, and 39.4% did not use bank loan at all.
- 58.6% of women responded that they are not eligible a loan offered by saving houses and 36.2% perceive themselves as eligible.
- In regard to who decides to apply for a loan from saving houses, only 0.2% of women respondents said that they decide by themselves only, 0.65% expressed that their husband decides alone.
- 7.5% expressed that the decision is made together with their husband, and 3.9% jointly in the household.
- However, women have a greater perception for unity of their household than men (7.5% of women believe they jointly make decisions vs. 6.9% of men).

In the domain Time allocation - Workload:

Methodology considers individuals as disempowered if they work more than 10.5 hours per day in the previous 24 hours (Alkire, 2013).

Women in agricultural sector have a larger workload than men. On average, women work 11.06 hours per day while men work 9.68 working hours per day. Men have mainly paid work<sup>8</sup>, whereas almost half of women's work is unpaid<sup>9</sup> (41,7% of the total workload belongs to unpaid work).

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<sup>8</sup> Activities included in paid work: On-farm work, Off-farm work, Products sale

<sup>9</sup> Activities included in unpaid work: Housework, Care for children and elderly members of the household

Table 4 Average workload (in hours)

Region	Men			Women		
	Total workload	Unpaid work	Paid work	Total workload	Unpaid work	Paid work
East	8.25	0.13	8.13	9.00	3.66	5.34
Northeast	11.88	0.00	11.88	17.56	10.50	7.06
Pelagonia	11.42	0.80	10.62	13.07	5.01	8.05
Polog	9.05	0.29	8.76	11.09	4.30	6.79
Skopje	10.68	0.24	10.44	10.79	5.19	5.60
Southeast	8.45	0.18	8.27	9.76	3.19	6.57
Southwest	10.28	0.33	9.94	11.08	5.06	6.03
Vardar	8.23	0.85	7.38	9.79	3.58	6.21
<b>Country Total</b>	<b>9.68</b>	<b>0.36</b>	<b>9.32</b>	<b>11.06</b>	<b>4.61</b>	<b>6.45</b>

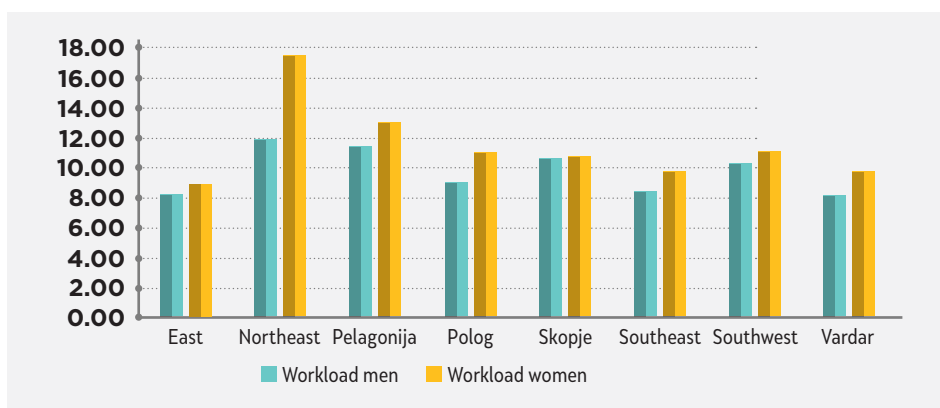


Figure 2 Break-down of workload between women and men (in hours)

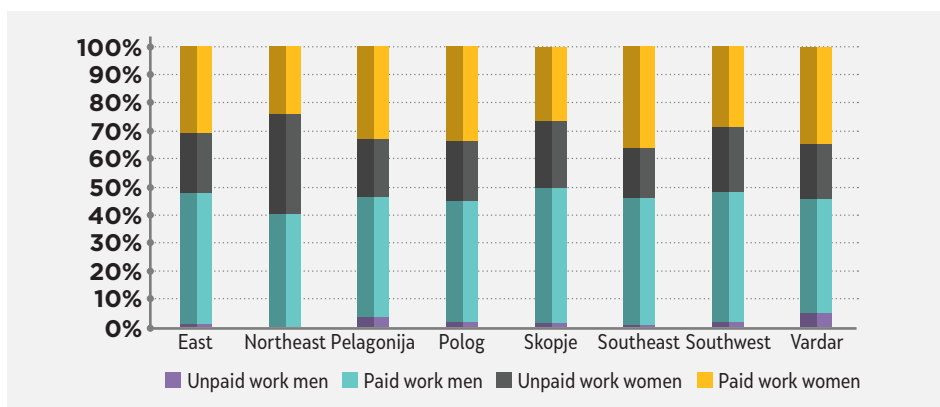


Figure 3 Break-down of workload between women and men (in percentage)



Table 5 Summary of the indicators and domain specific/related results (n=464)

Five Domains	Indicators	Selected results
Production	Input in productive decisions	<ul style="list-style-type: none"> <li>Constant lower participation of the women in the decision-making process in the productive activities and the control over use of income</li> </ul>
Resources	Ownership of assets	<p><b>Property/house</b></p> <ul style="list-style-type: none"> <li>4.07% of the women are owners of property/house</li> <li>95.9% of the men are owners of property/house</li> <li>In 21.96%, their parents are owners of property/house</li> </ul> <p><b>Land ownership</b></p> <ul style="list-style-type: none"> <li>12.01% of the women own the land</li> <li>87.99% of the men own the land</li> <li>90.35% of men make a decision on activities related to the land</li> <li>Only 9.65% of women have a leading role in decision making on activities related to the land</li> <li>50% of women landowners are not active in the decision-making process on activities related to the land</li> </ul>
	Access to and decisions on credit	<p><b>Saving houses</b></p> <ul style="list-style-type: none"> <li>58.6% of women perceiving themselves as <b>not eligible</b> for credit offered by saving houses (women less eligible than men)</li> </ul> <p><b>Banks</b></p> <ul style="list-style-type: none"> <li>47.6% of women perceiving themselves as <b>not eligible</b> for credit offered by banks (women less eligible than men)</li> </ul> <p><b>Macedonian Bank for Development Promotion (MBDP)</b></p> <ul style="list-style-type: none"> <li>67.9% of women perceiving themselves as <b>not eligible</b> to use credit from MBDP</li> </ul> <p><b>IPARD/Rural development programme</b></p> <ul style="list-style-type: none"> <li>61.85% of women perceiving themselves as <b>not eligible</b> for this programmes</li> </ul>
Income	Control over use of income	<ul style="list-style-type: none"> <li>When a woman is responsible for <i>farm accountancy</i>, the woman is significantly more empowered and exhibits lower gender parity gap</li> </ul>
Leadership	Group membership	<ul style="list-style-type: none"> <li>Only <b>5% the women</b> are active members in groups or associations</li> </ul>
Time allocation	Workload	<ul style="list-style-type: none"> <li>Women work in average 11.06 hours per day (41,7% of the total workload belongs to <b>unpaid work</b>)</li> <li>Man work in average 9.68 hours per day - <b>mainly paid work</b></li> </ul>

## STAGE Ia: ABBREVIATED WOMEN'S EMPOWERMENT IN AGRICULTURE INDEX

A-WEAI is composed of two sub-indexes: the five domains index (5DE) for women with the disempowerment index (1-5DE), and Gender Parity Index (GPI), that measures gender parity in empowerment within the household, with the empowerment gap (1-GPI) defined as the percentage difference in empowerment scores between women and men. The weights of the 5DE and GPI sub-indexes are 90% and 10%, respectively. The total AWEAI score is the weighted sum of the country or regional level 5DE and GPI. Improvements in either 5DE or GPI will increase A-WEAI (Alkire, et al. 2013).

Table 6 A-WEAI results (five domains of empowerment index, the disempowerment index, the Gender Parity Index, the empowerment gap)

Indexes	Women	Men
<b>5DE index</b>	Empowered in 64.3% of the indicators	Empowered in 83.5% of the indicators
<b>Disempowerment index (1-5DE)</b>	Disempowered in 35.7% of the indicators	Disempowered in 16.5% of the indicators
<b>Share of disempowered individuals</b>	58 out of 100 women are disempowered	33 out of 100 men are disempowered
<b>Average Gender Parity Index (GPI)</b>	Women exhibit empowerment scores that are 75.4% of those of men	
<b>Empowerment gap (1-GPI)</b>	The percentage difference in empowerment scores between women and men is 24.6%	
<b>Share of individuals not achieving parity</b>	66.6% of women do not achieve parity with their partner	33% of men do not achieve parity with their partner
<b>Gender Parity Index of sub-sample disempowered individuals</b>	Women exhibit empowerment scores that are 62.7% of those of man	
<b>Empowerment gap (among those without parity)</b>	The percentage difference in empowerment scores between women and men is 37.3%	
<b>Abbreviated Women's Empowerment Index in Agriculture (A-WEAI)</b>	The overall A-WEAI (0.654) exhibits significant potential for improvement either through improving 5DE or by reducing the empowerment gap between women and men	

The indexes that have been calculated are the five domains of empowerment index (5DE), the disempowerment index (1-5DE), the Gender Parity Index (GPI), the empowerment gap defined as the percentage difference in empowerment

scores between women and men, and the Abbreviated-Women’s Empowerment in Agriculture Index (AWEAI) defined as  $AWEAI=90\%_5DE+10\%_GPI$ . The average value of the 5DE index is 0.643 for women which mean that women are on average empowered in 64.3% of the indicators while men are empowered in 83.5% of the indicators. On the up-side, the disempowerment score can be interpreted as the opposite of the 5DE index; i.e., women are disempowered in 35.7% of the indicators. Given these scores of empowerment/disempowerment, the percent of disempowered individuals amounts to 57.7% for women and 33.3% for men. One can also calculate the disempowerment score for the sub-sample of those that do not achieve empowerment. Among the disempowered women, the disempowerment score is 61.9% while it is 49.7% for men. The average GPI score is 0.754 which means that women exhibit empowerment scores that are 75.4% of those of men. The GPI score is even lower (62.7%) if we restrict the sample to those that do not achieve parity with their men partner. This difference with men is reflected in the average empowerment gap which amounts to 24.6% ( $=1-GPI$ ). Overall, 66% of women do not achieve parity with their men counterparts and exhibit a small or large difference in empowerment scores which is reflected to the GPI. Finally, the AWEAI is a weighted average between 5DE and GPI. The AWEAI amounts to an overall value of 0.654 and exhibits significant potential for improvement either through improving 5DE or by reducing the empowerment gap between women/men.

In addition, the level of disempowerment index (1-5DE) was measured at the regional level (Figure 3). The red line in the graph is the national average of the disempowerment index (DAI). For example, one can observe that regions like Vardar, the Southeast and Polog exhibit the largest gap between genders. Their level of disempowerment is also above the national average for women but is below the national average for men. One of the regions that seems to be in relatively good position among others, is Skopje not only because it exhibits one of the lowest gaps between men and women in terms of disempowerment but also because both men and women disempowerment scores are lower than the national average.

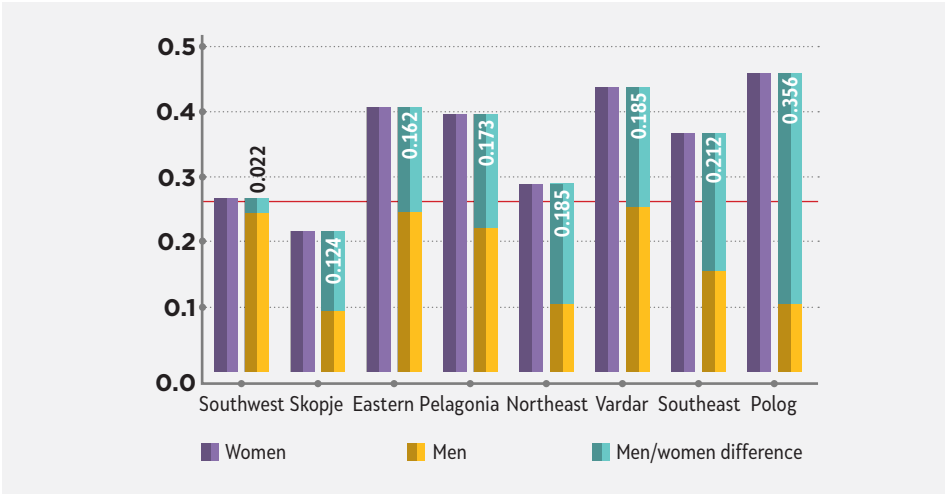


Figure 4 Regional representation of the disempowerment index (red line - the national average of the disempowerment index)

### Domain specific/related results

Women are disempowered in almost all domains, yet *ownership of assets*, *input in decision making*, and *control over use of income* contribute most to women's disempowerment. These three indicators make around 34.5% of the value of the disempowerment index in agriculture for women but only 10.1% of the value of the disempowerment index in agriculture for men.

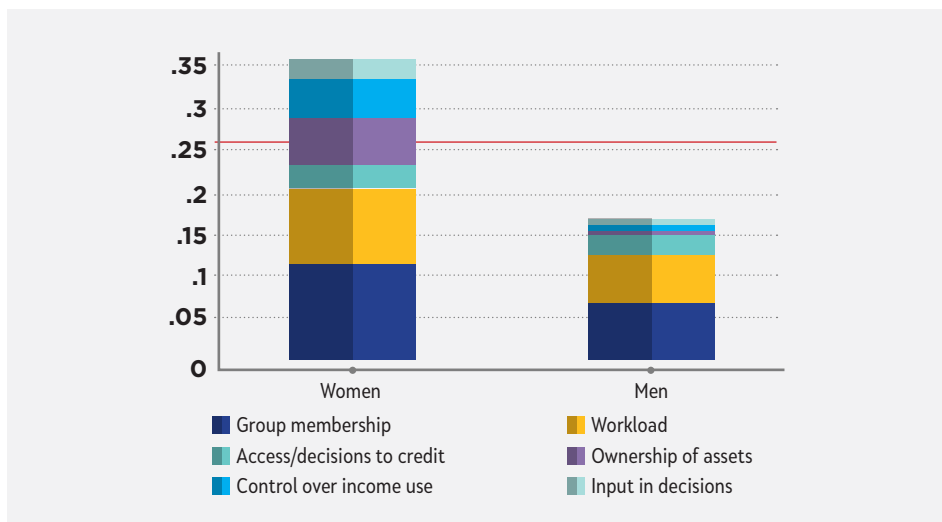


Figure 5 Contribution of the domains/indicators to the women's disempowerment (red line - the national average of the disempowerment index)

Brief results from the regressions of the 5DE index on a set of explanatory variables are presented below (standard errors are clustered at the household level for the pooled models). Models (1) to (3) show more parsimonious specifications while models (4) to (6) show specifications with an augmented set of variables. The later comes at the cost of a lower sample size being used in the regressions due to missing values in several of the variables being used. Furthermore, regressions over the pooled sample as well as by gender generated the following results:

- Men exhibit on average higher empowerment in 19.1% of the indicators.
- Formal education does not significantly affect empowerment levels.
- Households where the woman is responsible for farm accountancy exhibit higher empowerment levels (as compared to households where the man is responsible for farm accountancy) by as much as 28.8% when it comes to women empowerment levels. However, the responsible person for farm accountancy does not affect the level of empowerment for men.
- Household composition in terms of gender and age of their members does not affect the level of empowerment except when there is a daughter or woman older than 40 years old living together in the household. In this case, we find that the level of empowerment of the woman can be lower as much as 40% while at the same time the score of the man can be higher by 13.2%.

Regression results of AWEAI, GPI and GPI gap on similar sets of explanatory variables generated the following:

- Formal education does not affect any of the indexes.
- Regions: the Eastern region exhibit higher levels of the AWEAI. The Southwest exhibits higher levels of AWEAI, GPI and a smaller GPI gap (all results should be interpreted in reference to Skopje which is the base category).
- Households where the women are responsible for farm accountancy exhibit higher AWEAI and GPI and a smaller GPI gap. Similar results hold for households that both the man and the woman are jointly responsible for farm accountancy, albeit the absolute effect is about half of that when only the woman is responsible.
- The ration between women and men significantly affect GPI and the GPI gap. When more women are present in the household, women show a relatively higher GPI score and a lower GPI gap.
- When the daughter older than 40 years is living together with the parents in the household, the levels of AWEAI and GPI are smaller while the GPI gap is larger.

Regressions of 5DE on a similar set of explanatory variables as before broken down by indicator (results from parsimonious and augmented specifications, broken down by gender) generated the following (results come in two panels, a parsimonious specifications panel (models (1) to (6)) and an augmented specifications panel (models (7) to (12)). For each panel, results are obtained from a Seemingly Unrelated Estimation where standard errors are adjusted for clustering at the household level):

- Older individuals have higher values (and consequently are more empowered) in the ownership of assets and workload indicators but lower values in the input in productive decisions and control over use of income indicators.
- Men are more empowered across all indicators.
- Results for households where the women are responsible for farm accountancy follow a consistent pattern with previous results except that when we look at how indicators are affected by this variable, we don't find an effect for the input in productive decisions and workload indicators.
- When there is a woman offspring of the couple older than 40 years old living together in the household, this negatively affects all indicators except credit and group membership.

## STAGE II: EXPERIMENTAL ECONOMICS METHOD - ALLOCATION GAME

In the allocation game, couples from 462 agricultural households were asked to allocate a sum of money between them and their partner. Couples had to choose between an equal divide of a smaller amount of money inefficient for the household - max. 400 MKD (see option A, picture 2) or a larger sum of money but which involves an unequal division but efficient for the household - max 600 MKD (see option B, picture 2). About half of all households choose efficient allocations, which means maximising profit for the household but unequal division of the money between partners. When couples have to make joint decisions, more couples are able to agree in efficient allocations (percentage raises to 59.3%) (Table 7).

For individual decisions, around 11% of women and 12.1% of men seek to maximize their own payoff. The number of men seeking to maximize their own payoff drops when a joint decision has to be made but it is virtually null for women since no woman seeks to maximize her payoff when in a joint decision environment. This asymmetric effect between men and women shows that men have a higher bargaining power for intra-household allocations.

In addition, while none of the subjects chose to maximize the other one's payoffs when they make individual decisions, *a small percentage of women (6.3%) chose to maximize their partner's payoff when they made joint decisions, likely subduing to the demands of men.*

According to Wilcoxon signed-rank tests, the distribution between men and women does not differ for any of the classifications exhibited in Table 7 as far as the individual decision making is concerned. Similar conclusions are in place if we use proportions tests. Hence, men and women are classified in the various groups of Table 7 in similar proportions. However, we do find differences when we compare individual with joint decisions. For example, the number of selfish members reduces under joint decision making for both genders, but the drop for women is down to zero. For men, a small percentage of them still choose to maximize their own payoff even when jointly deciding between options, which highlights the fact that men have a higher intra-household allocation power than women.

Another result from Table 7 is that under joint decision making, men and women choose more often to maximize their joint -payoff than when choosing individually.

In order to correlate the behaviour in the experimental game with values of the indexes 5DE, AWEAI and GPI, random effects probit regressions were run, where the dependent variable is whether a subject makes an inefficient allocation decision (chooses option A, presented in table 2) or an efficient one (chooses option B). The basic specification uses dummies for the mode of the decision environment (woman decides alone, man decides alone, couple makes joint decisions), the money that the more efficient option (option B) allocates to the women (in units of 100 denars), and the value of the index elicited through the survey questions. Because, it is likely that these three basic sets of variables affect the probability of choice non-linearly, our basic setup contains all two-way

and three-way interaction terms of these basic variables. Information criteria values like Akaike's information criteria are always in favor of the model with the interaction terms, so the findings were based on this model.

Table 7 Classification of individual and joint decision making by gender

	Individual decisions				Joint decisions			
	Females		Males		Females		Males	
Max own payoff	51	11.06%	57	12.36%	0 <sup>+</sup>	0.00%	29 <sup>±</sup>	6.29%
Max couple's payoff	229	49.67%	223	50.54%	274 <sup>+</sup>	59.44%	274 <sup>±</sup>	59.44%
Max others payoff	0	0.00%	0	0.00%	29 <sup>+</sup>	6.29%	0	0.00%
Irrational	15	3.25%	16	3.47%	17	3.69%	17	3.69%
Sensitive to efficiency-equality trade off								
Symmetrie	36	7.81%	33	7.16%	37	8.03%	37	8.03%
Asymmetric-selfish	70	15.18%	62	13.45%	47 <sup>+</sup>	10.20%	57	12.36%
Asymmetric-altruistic	60	13.02%	60	13.02%	57	12.36%	47	10.20%
Total ouseholds	461							

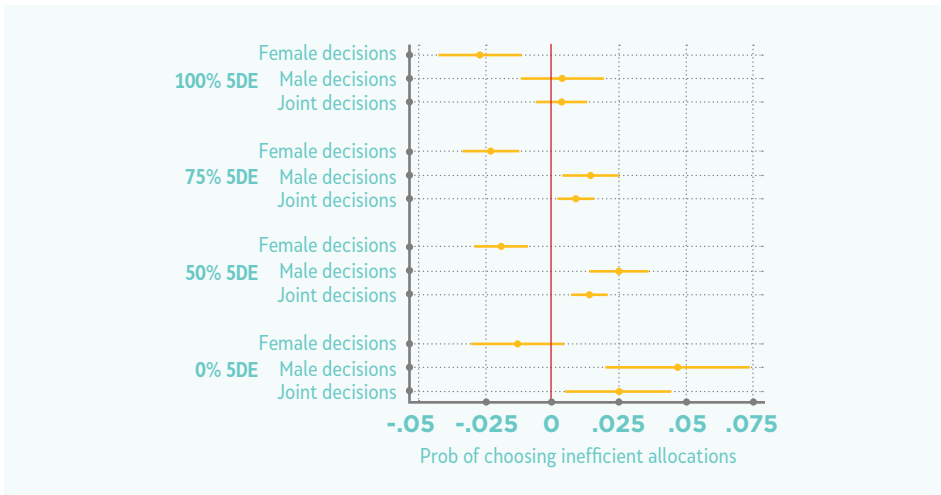
Notes: The + symbol indicates a statistically significant difference with female decision making at the individual stage according to a Wilcoxon signed-rank test and a proportion test. A ± symbol indicates a statistically significant difference with male decision making at the individual stage according to a Wilcoxon signed-rank test and a proportion test.

Given roughly similar results obtained through the various specifications, marginal effects using the estimates of model were derived (1). Because interaction terms significantly complicate interpretation, marginal effects for various values of the independent variables were derived and are presented graphically in Figure 6.

Figure 6 shows the marginal effects (ME) and associated 95% Confidence Intervals (CI) for an increase of 100 denars in the amount of money allocated to women in option B. More money allocated to women should be interpreted as less money allocated to the man partner. In addition, given that option B varies the money allocated to the women partner from 50 to 550 denars, going down from the first row of Table 2 to the last row should be interpreted as 5 times the magnitude of the marginal effect shown in Figure 6. Figure 6 also depicts a vertical red line on zero and consequently any CI crossing over the red line should be interpreted as a null effect. Given that most CI lines do not cross the red line, we can safely conclude that subjects are responsive to how money are allocated between partners. Furthermore, the CI intervals get closer to the red line for higher values of the women 5DE (higher values of the 5DE should be interpreted as more empowered women; e.g. a 100% value of the 5DE means complete empowerment). This is to say that for more empowered women, increasing the money allocated to the woman partner does not significantly affect the probability of inefficient allocations.

The CI intervals for the 0% 5DE (totally disempowered women) show that when

men make decisions alone but also when partners make joint decisions, more money allocated to the woman partner results in a higher probability of choosing an inefficient allocation for the household. However, these effects are mediated for higher values of empowerment so that for totally empowered women (100% 5DE), men are not more likely to make inefficient allocation (alone or jointly) when money allocated to the women increase. In fact, for totally empowered women, increasing the money allocated to the women results in a lower probability of choosing an inefficient allocation (upper part of the graph; the CI line spans at the left of the red line).



Note: A 100% for 5DE can be interpreted as a woman that achieves empowerment in 100% of the five domains of empowerment.

Figure 6 Marginal effect (and 95% CI) of an increase of 100 Denars on the money allocated to the Women household member on the probability of choosing an inefficient allocation for the household (Option A in Table 2) by 5DE levels and decision making mode

## Key findings

### Money-allocation game

- When couples have to make joint decisions, more often couples are able to agree to maximize the household's income.
- Women do not seek to maximize their individual income when they jointly decide with the partner how to allocate the money.
- When they make joint decisions for the income allocation, women more often subdue to the demands of men in maximizing men's income instead of the household's.
- Women are likely to align their decisions with men when in joint decision making mode.



## *Women empowerment as a moderator of behaviour in the money-allocation game*

- Men partners of disempowered women are not likely to maximize the efficiency of the household but rather their own.
- When money allocated to the women increase then: a) empowered women are more likely to choose allocations that favor them and the household and move away from an equal split of money; b) men are more likely to choose an equal (but inefficient) split of money when the women are disempowered; c) men are not likely to choose equal (but inefficient) split of money when the women is empowered
- Men partners of highly empowered women are more likely to contribute to the efficiency of the household by allocating more money to the woman and the household, even though they get less money themselves.

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## STAGE III:

# GENDER ASPECT IN THE POLICY SUPPORTING THE AGRICULTURAL AND RURAL DEVELOPMENT IN REPUBLIC OF NORTH MACEDONIA

## GENDER-SENSITIVE POLICY ANALYSIS

### *Law on agriculture and rural development (2010)*

The Law on Agriculture and Rural Development (LARD) is the systemic law regulating agriculture and covers the general policy framework, whereas certain specific aspects are regulated with a dozen of other laws and by-laws. It is a product of harmonization of the policy of North Macedonia towards the Common Agricultural Policy of the European Union (replacing the LARD from 2007), thus, it follows similar two pillar structure: direct payments and rural development. It defines the national policy developmental goals; regulates the process of policy planning and design, policy implementation and the process of monitoring and evaluation; it defines and regulates the supporting measures, such as market oriented measures, direct payments, rural development measures, and state aid measures; and it regulates establishment and organization of partnerships with the socio-economic stakeholders, as well as establishment and organization of producer groups.

The national agricultural policy has defined five goals: (1) Ensuring stable production of quality and cheaper food and ensuring sufficient supply of food for the population; (2) Increasing agricultural competitiveness; (3) Ensuring stable income of the agricultural households; (4) Sustainable development of the rural areas; and (5) Optimal use of natural resources respecting the principles for environmental protection.

Gender (or woman/women) is mentioned several times in the document.

It proposes keeping evidence of the socio-economic partnerships (Art.24), which, among others, includes the civil society organizations working on protection of the interests and role of young farmers and women farmers, as well as promotion of the role of the women in the rural in the development of the agricultural and the rural areas.

It is among the criteria for user selection (Art. 91), along with the purpose, amount and place of the investment, type of applicant, and age (and gender) of the farm/company holder. However, each of these criteria is to be further defined and prescribed by the Minister.

It fosters women participation in decision making for local rural development by article 89 that defines that civil society organizations focused on farmers, youth, women and environmental protection must be represented with minimum 50% share in local action groups (LAGs).

It foresees additional aid for certain categories of holders of agricultural holdings (Article 102), as percentage increase of the received direct payments. Women have been listed together with the young farmers (less than 40 year old), to be eligible for 10% increase of the direct payments. However, with an amendment to the Law (OG 126/2012), the term 'women' has been removed from this article. An official explanation and background for this change was not provided, but as discussed informally it is due the misuse of this measure; namely, women that

became farm holders (i.e. replaced the man farm holder), have not necessarily become the decision maker on the farm.

### ***National Strategy for Agriculture and Rural Development (NARDS) 2014-2020***

The strategic goal defined in this document is *“increasing the competitiveness of the Macedonian agricultural production and the food industry, development of rural areas and sustainable management of natural resources”*. This covers few of the stated goals of the national agricultural policy defined in LARD.

The situation analysis provides few gender divided information. In the demographic and educational structure of rural population, it is stated that about 70% of the women (as is the case with men) are working age population, whereas regarding the educational aspects, that the share of illiterate women (5.5%) is higher than that of men’s (1.7%). In addition, it reports that the share of women formally employed in agriculture, forestry and water management (we assume it is meant ‘fishery’) is 20.3% of the total number of employed women in the country, and that 64% of the unpaid family workers are women.

The status and role of rural women and related actions to its improvement receive quite an attention in this document. It identifies the importance of involvement of rural women in obtaining sustainable social structure of rural communities and sustainable development of rural economy, thus, it state that supports *“establishment of equal opportunities and gender-based conditions”* for it. The Strategy affirms a strong statement that *“generally all measures and programs in the Ministry of Agriculture... will contribute to improving the living conditions of women in rural areas and their involvement in policy making and utilizing available resources at local and national level”*. It does not explain how all measures and programs will make such a contribution, but envisages few concrete actions (*ibid*):

(1) The problem of women abandoning rural areas is treated by introducing a measure for *“continuous support for active women members of the agricultural holdings”*. The eligibility criteria are quite restrictive, thus, raising the question what is the number of the potential beneficiaries, and what is the real objective to be met. Namely, women need to be: (i) up to 40 years of age; (ii) married to a member of an agricultural holding and a mother of at least one child; (iii) unemployed, housewife, and actively maintains the agricultural holding; and (iv) living in a settlement with less than 200 inhabitants. This measure is proposed to be realized as direct payment or to compensate the compulsory insurance, in annual amount of 70% of the minimum salary in the country. It is time limited from the birth of the first child until the age of 50 and it is foreseen as a compensation for the women labor in the household and the farm.

(2) The economic empowerment of women in agriculture is to be supported by recognizing the women as *“important driving force for change at all levels”*. Therefore, NARDS foresees two types of support within the rural development programs, both national and EU funded: (i) granting projects proposed by women additional 15 points, thus ranking their projects higher in the selection process; and (ii) supporting the establishment of producer groups of rural women, once the measure to support producer groups is introduced.

(3) Involving women in decision making at local and national level by encouraging women’s’ participation in the management of LAGs and in the working bodies

established within MAFWE. In addition, it foresees “*measures for training and non-formal education of rural women and their access to counselling services*”.

(4) *Improving gender equality is to be realized by gender sensitive monitoring and evaluation of the programs implementation.*

### **National Programs for Agriculture and Rural Development (NPARD)**

The national programs for agriculture and rural development follow the goals defined in the LARD. They are five-year operative plans, linking the NARDS and the annual programs for financial support of agriculture and rural development. The very first program, the National Program for Agriculture and Rural Development (2013-2017) does not mention the gender issue, whereas the later one, the National Program for Development of Agriculture and Rural Development (2018-2022), includes a measure directed to women in rural areas. Namely, among other measures for improving the quality of life in rural areas, it plans a measure for “improving the position and the role of rural women and keeping the rural population by a supporting instrument for unemployed women in agriculture and improving gender equality”. The proposed instrument is the same measure “*continuous support for active women members of the agricultural holdings*” given in NARDS 2014-2020, additionally burdening it with an extra requirement the women to be living in a settlement above 700 m. altitude. What is most important is the fact that in 2019 this measure was accepted as discriminatory for the women in agriculture and rural areas. As result it was changed in measure 115 of the National program for financial support for rural development for 2019. The new measure supports women - active members of household and holders of agricultural household to apply for processing or adding value to the agricultural production with 3000 EUR.

### **IPARD I (2007-2013)**

The overall objective of pre-accession assistance is to support the country's adoption and implementation of the *Acquis*. The IPARD program have two specific objectives: “(1) Improving the technological and market infrastructure of commercial agricultural holdings and food processing industry aimed at increased added value of agro-food products and achieved compliance with EU quality, health, food safety and environmental standards; and (2) Improved quality of life of the rural population, increased income and creation of new employment opportunities”. To achieve those objectives it incorporates the measures listed in tables in annex.

The gender approach is much more present in this document. The background information presents the share of working age population that is identical as the one presented in the NARDS (67.7 % of women, and 68.8% of men); and the illiteracy rate as twice the level of the men. It states there are regional differences of the gender unemployment, and the number of women employed in fishery (78 out of the 442). As a baseline indicator regarding the structure of employment it identifies the “share of women in the total employment” (38%). The women, *i.e.* their increased employment, together with the high share of young population, are expected to bring a change in food demand toward less conventional types of food. Out-migration of women, young and the economically active population, as a cause of the rural depopulation and ageing of rural areas is identified as

a threat in the related SWOT analysis. In addition, when describing the eligible measures for development of rural economy, it recognizes rural tourism among the diversification activities, as a suitable approach for sustainable income for rural women and young population. Among the rural services eligible under measure 302 listed in the annex of this document are the following: event catering activities, residential nursing care activities, child day-care activities, laundering and dry-cleaning, etc.

To improve the gender and age structure in agricultural production and in rural areas, as well to support the women and young economic operators, the applications are granted additional points in the scoring of the applications according to the selection and priority criteria. These scorings are proposed for ranking the application, when the requested budget is beyond the available budget for that measure, but following the order of receiving the application. The dedicated points for investments proposed by households and economic operators run by women are 15, whereas for investments projects under the diversification measure that are proposed by women the extra scoring is 10 points. In addition, it identifies the “share of women of total assisted farmers” as a program indicator and targets it to about 15%.

The issue on equal opportunities is given a separated space, stating that the IPARD program is prepared following the equality principle and would not tolerate any discrimination based on gender, religion, ethnicity, or physical disability. Moreover, it emphasizes the main objective of the Law on equal opportunities for woman and man from 2006 (OG 66/06): “promotion of equal opportunities for women and men in political, economic, social, educational and other areas of public life”). The women, through gender promoting civil society organizations, are given a chance to get involved in preparation, implementation, monitoring and evaluation of the IPARD program. These organizations are meant to serve as additional communication media and support the transparency, thus to be regularly informed about the offered financial opportunities and the applications procedures.

### **IPARD II (2014-2020)**

The share of working age population presented in the background information shows a decline of women share (from 67.7 % to 52.7%), that further emphasizes the rural depopulation and ageing of rural areas as a threat for the development of the rural areas. The illiteracy ratio is the same as in previous document (2:1), and regarding the employment rate it states gender equality. It is accentuated that agriculture serves as a social mitigation of poverty and unemployment, referencing to studies that had identified “positive correlation between income and the number of non-agricultural activities that the household undertake”, and that “mixed households produce higher incomes than the agricultural household [whereas] the non-agricultural rural household are the poorest ones.”

The equal opportunities and non-discrimination based on gender, race, skin color, language, religion, national or social background, material and social status are given as principle of the program. Its monitoring and evaluation bases on gender disaggregated evidence.

Concerned about the status of rural women, projects promoted by women are among the horizontal and cross-cutting priorities to be taken into consideration

during the program implementations. In that regard, the selection criteria are divided between the (1) environmental and animal welfare focus, which takes about 60% of the points, and (2) applicant, with 40% share. The additional points granted for women applicant are: 20 points for the family agricultural holding run by a women or youth (18 to 40 years of age) applying for measure 101; 10 points for the food operators and agricultural cooperatives represented by women applying for measure 103; and 10 points for application for measure 302 submitted from a women as a natural person or as a representative of a microenterprise.

Again, the women are given a chance though the gender promoting civil society organizations to get involved in preparation, implementation, monitoring and evaluation of the IPARD program, and to serve as communication media, thus to be regularly informed about the offered possibilities and the procedures for funding within the IPARD program. Women focused organizations that have been consulted on the IPARD program (among other organizations) are the Network of Women Farmers and the Agrovinka Vinica. In the summary results from these consultations is a proposal for increase of the co-financing rate for support of women farmer to 65%. Women promoting organizations are also listed among the organizations forming the National Rural Development Network, as partner to MAFWE in identifying the priorities and required changes in policy implementation.

The enclosure of concrete gender-sensitive aspects analysed in these documents is summarized through the lens of five domains in Table 1. The relevant policy mainly focuses on support of production investments (including equipment and machinery) and women inclusion in the policymaking process in the line Ministry of Agriculture, Forestry and Water Economy (MAFWE), as well as in Local Action Groups (LAGs). The diversification of economic activities, as particularly suitable for gender-specific capacities and aspirations, is not fully used. The workload dimension is not much addressed and included as such in policy documents. However, the IPARD diversification measure potentially offers freeing rural women of some domestic obligations, such as childcare, nursing care, and catering. There is a need to better inform farmers about the opportunity for including additional activity on the farm (LARD, 2010, Art. 82-85). These are just few examples of taking advantage of the current program and measures framework to support gender equality.



Table 9: Summary of gender-sensitive aspects in the relevant documents structured by the five domains

Domains	Production & Resources	Income	Leadership	Time allocation (Workload)
Key documents				
<b>Law on Agriculture and Rural Development (LARD, 2010)</b>	Gender is among criteria for user selection (Art. 91)	Additional aid for women as holders of agricultural holdings (Art. 102, until 2012)	Civil society organizations (CSOs) promoting rural women recognized as MAFWE social partner (Art. 24) Women participation in LAGs (Art. 89)	
<b>National Agriculture and Rural Development Strategy 2014–2020 (NARDS)</b>	Prioritizes projects proposed by rural women by granting additional points	Proposed measure to provide “continuous support for active woman members of the agricultural holdings”	Supports women inclusion in LAGs decision making and in MAFWE working groups Supports establishment of producer groups of rural women	
<b>National Programs for Agriculture and Rural Development 2018–2020 (NPARD)</b>		Operationalizes the above measure defined in NARDS, planned for 2020 (M. 115)		
<b>EU Instrument for Pre-accession for Rural Development 2007–2013 (IPARD I)</b>	Projects by women are granted additional points in the evaluation process in all measures	Rural tourism sector stressed as suitable for providing sustainable income for rural women, as diversification activity	Women, through CSO, are involved in preparation, implementation, monitoring, and evaluation of the program	Some eligible services under M302 potentially offer women free time
<b>EU Instrument for Pre-accession (IPA) Rural Development Program 2014–2020 (IPARD II)</b>	Projects by women are granted additional points in the evaluation process in all measures		Women, through CSO, are involved in preparation, implementation, monitoring, and evaluation of the program	

## GENDER-SENSITIVE BUDGET TRANSFERS ANALYSIS

Annual programs are operative documents for implementation of the agricultural and rural development policies, defined strategically in the NARDS 2014-2020 and the long-term operative plans, such as the NPARD 2013-2017 and NPARD 2018-2022. The annual programs and the related documents (regulations and rulebooks) and the many amendments are published at the AFSARD website.

### *Annual Programs for Financial Support of Agriculture (2013-2018)*

There is relatively big number of measures (from 29 to 36 are offered annually) in the Program for Financial Support in Agriculture that are regularly allocated to farmers as payments per output or per capacity (area or livestock number). Table 11 (in Annex) lists the measures in the Programs for financial support of agriculture and rural development, for the period 2013-2017. There are no gender specific direct payment measures; women can equally apply for a support, as long as they are farm holders.

The first issue to be raised regarding the direct payment program implementation is the category of 'no gender information' available in the AFSARD database. Such a data gap impedes gender based policy and programs analysis. The number of applications with not-available gender information is significant (15% in average). Knowing the correct situation may change the whole picture on the gender specificity of the program implementation.

Regarding the available gender specific data, the share of women have increased over the years in all aspects: the number of submitted applications (from 13.88% in 2013 to 16.88% in 2017), the number of approved application (from 14.05% in 2013 to 16.86% in 2017) and the value of approved applications (from 10.12% in 2013 to 12.43% in 2017). There is a noticeable difference in the average value of application between men (53.753 MKD), women (35.682 MKD) and gender unspecific recipient (39.988 MKD). One cannot discuss the reasons behind this difference without information of the type of measures they are related to. All in all, since the measure for additional payments to women farmers are not present during all those years, this modest increase in the number of applications for direct payments submitted and received by women farmers can be explained either with the increased number of women farm holders, as a result of the prioritizing women farmers in the rural development program, or as a result of increasing awareness of women role and contribution as general trend and in agriculture. Additional questions of interest are: (i) which of those measures women applied most for, and (ii) is there a pattern that differs between women and man behaviour on this issue. Since AFSADR provided gender specific data aggregated on the program level, thus these questions cannot be answered.

### *Programs for Financial Support of Rural Development (2013-2018)*

There are no specific measures addressed to women in the list of structural and developmental measures in the program for rural development. The support women gain in this program is that if they are farm holders they receive additional points in the evaluation criteria.

Regarding the rural development program, the share of women applications for rural development measures have also increased. This increase is stronger

in terms of number of applications (from 24.07% in 2015<sup>10</sup> to 35.65% in 2017) and the value of requested investment (from 23.62% in 2015 to 35.97% in 2017). Regarding the number of approved applications and their related values, this increase is smaller (from 29.17% to 33.02% and from 31.53% to 33.20%, respectively). An interesting notion is that the average value per application from women is higher than those from men, and this difference is even higher at the level of approved applications. Again, the reasons behind this difference can be discuss only with information of the type of investment they are planning to make. As the case with the direct payment data, considering the aggregated data, we cannot give answers to the questions which of those measures women applied most for, and if there is a pattern that differs between women and man behaviour. All in all, women appear to be well supported by this project. Given the priority to women in evaluating the investments project (by adding extra 30 points), one can say that men are discriminated in this process, but considering the disempowerment position of rural women this can be seen a chance given to women to realize projects they identify as important and needed.

### *IPARD I (2007-2013)*

There are much fewer applications and budget transfers in the IPARD program in relation to the national rural development program, or the program for direct payments. Regarding the gender sensitive transfers of this program, women are relatively well represented, exceeding the program set target of 15% in all three measures. As is the case with men farm holder applicants, women are mostly interested in investments on the agricultural holding. Considering the requested value of the proposed investment, women requested higher amount than men holders in the measures for investment in processing and marketing. Regarding the third measure, diversification and development of rural economies, the number of applications by women is very low (only five), but with high success rate, since three of them have been contracted and two realized (compared to the two finished out of 48 applications from men).

Gender disaggregated data on the implementation of the annual programs for financial support of agricultural and rural development and IPARDI (AFSARD, 2018) indicate that, in average, women farm managers receive about 30% lower income from subsidies compared to men; apply less frequently to structural measures, but with slightly higher amounts per project; similarly as men, most women apply for the on-farms investment measures set in IPARD. The data do not allow for deeper gender analysis within the programs and measures, hence the need for more detailed gender disaggregated data and statistics for future analyses.

<sup>10</sup> There is no available data on the gender specific implementation for the rural development program for 2013 and 2014.

Table 10: Summary of gender-sensitive analysis of budgets transfers

Program	Measures (group)	Conclusion
<b>Program for financial support of agriculture (2013–2017)</b>	Direct payment	<ul style="list-style-type: none"> <li>• 15% of applications are not gender disaggregated.</li> <li>• In average, women farm holders receive lower income from subsidies (35,682 MKD vs. 53,753 MKD of men).</li> </ul>
<b>Program for financial support of rural development (2015–2017)*</b>	Structural and rural development	<ul style="list-style-type: none"> <li>• Average value per application from women (461,342 MKD) is higher than those from men (424,970 MKD)</li> </ul>
<b>IPARD 2013–2017</b>	M101	<ul style="list-style-type: none"> <li>• 74 out of 83 applications by women are for M101 - investment on-farm (compared to 343 out of 410 for men).</li> </ul>
	M103	<ul style="list-style-type: none"> <li>• Investments in processing and marketing – specifically only one finished investment by women (compared to 5 from men).</li> </ul>
	M302	<ul style="list-style-type: none"> <li>• Women have a higher success rate in diversification projects: from 5 submitted, 3 are contracted, and 2 are finished (compared to 48 submitted by men, 2 contacted, and 2 finished).</li> </ul>

\*Data not available for 2013–2014

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## PART IV: CONCLUSIONS AND RECOMMENDATIONS

Our findings generally indicate that women are disempowered in all domains but domains that contribute most to the women's disempowerment are: ownership of assets, input in decision making, and control over use of income. On the other hand, a positive impact on the higher empowerment of the households and smaller gender parity gap is when women are responsible for farm accountancy within the household. Based on that, more empowerment will be given to the women if further policy interventions consider the importance of the women in agriculture being responsible for farm accountancy/control over income use, increased ownership of assets and increased input in decision making.

The overall A-WEAI is 0.654 and exhibits significant potential for improvement either through improving the empowerment in the five-domains or by reducing the empowerment gap between women and men.

In decision-making, 90.0% of women have contribution in some or most decisions for income distribution for household purposes, showing the important role of the women for the household. On the other hand, lowest distribution in the income obtained from another job or daily salary, show lower income diversification for the women of other economic activities. Men tend to have additional incomes from non-agricultural activities, while women in small extent have additional incomes from non-agricultural activities.

In addition, women behave differently when deciding alone or deciding jointly; in the husband's presence, women tend to align their decision with their husband. On the other hand, men tend to have higher bargaining power for intra-household decision-making.

The findings clearly suggest that women disempowerment negatively affects welfare of women but also the household. According to the economic experiment, the higher the disempowerment of women, the less likely that more money will make women to choose the efficient allocation. *This implies that giving disempowered women more money would not necessarily help unless they are given more empowerment.* On the contrary, empowered women are more likely to maximize household's efficiency.

The agricultural and rural development policy supports women mostly in the production and group membership domains. On the other hand, policies or initiatives that would provide women more responsibility over farm accountancy/control over income use and ownership of assets and Input in decision making would give them more empowerment.

From an institutional perspective, strong institutional capacity for gender responsive budgeting requires strong political will, transparency and availability of gender statistics and gender-disaggregated data (UN Women, n.a). The political will is usually reflected in the policy goals and related budget. The transparency is an additional proof of the political will, and it requires gender statistics and gender-disaggregated data. But, first of all, the strong institutional capacity requires an awareness of the existence of differences among gender that need to be properly addressed before a commitment for reducing the existing gender gap can be made.

The policy and strategic goals in the country are not gender specific. The beneficiaries of those goals are agricultural and food producers (by ensuring a

competitive sector), consumers (by ensuring stable supply of safe, quality and cheap food), and rural population (by developing rural areas). Yet, goals need to address the needs of both women and men equally, that often might differ. Therefore, there is a need to know women's and men's role and contribution, their specific needs, and challenges, aspirations and capacities. Such a knowledge is achievable with available gender-disaggregated data (i.e., detailed information on gender differences by measure, sub-measures, location, age, etc.), as evidence for gender responsive policy planning and budgeting.

Gender indicators to track program implementation are available only for the IPARD program, whereas the NARDS and NPARDs have not proposed ones. This might be one evidence that the gender equality described and supported in them, might not be fully understood and applied. In line with this is the statement that all the measure will contribute to improved living condition of rural women. Even if they had such an intention, given the structure of the measure, it is not possible. In addition, the measure "*continuous support for active women members of the agricultural holdings*" given in NARDS and later confirmed in NPARD 2018-2020, present the misunderstanding of this concept, and the possible lack of communication with the responsible bodies and institutions.

Many actors implement gender responsive budgeting, such as institutions responsible for budgetary policy (Ministry of Finance), then those working on social aspects and gender equality (Ministry of Labor and Social Policy), and those focused on sectoral planning and implementation (MAFWE and AFSARD). Their work is often monitored and evaluated by the academia and the non-governmental organizations. Their strong cooperating strengthens the institutional capacity and achievement of the goals.

**Recommendations:** To confirm its political will, the government needs to include gender aspects in all future agriculture and rural development policies, and to emphasize gender equality in policy goals and objectives.

To appropriately address the gender aspects in the policy documents and related budgets, government needs:

- To establish gender unit in the MAFWE to provide support on a regular basis. The employees in this unit need to be properly trained and mentored on planning and implementation of gender-needs assessment, use of gender statistics, promotion of gender-disaggregated data, defining gender indicators, and building gender-responsive policy and budgeting.
- To raise awareness about gender equality within MAFWE and other key institutions at various planning and decision-making levels so that they will understand the gender perspective, and so that they can recognize and support gender empowerment in their regular work.
- To set up a system of strong and regular cooperation between institutions to adequately and fully address gender needs, for example, between the gender unit in MAFWE and the Department for Equal Opportunities within Ministry of Labor and Social Policy (as an umbrella body on the gender issue) and between the MAFWE and AFSARD for program monitoring and evaluation. This cooperation needs to be mandatory in policy design and monitoring.
- To design and monitor programs based on evidence, hence, the use of gender-disaggregated data and statistics in program preparation and evaluation needs to be obligatory. This also means that the requirements in terms of gender statistics, gender-disaggregated data, gender indicators, and targets need to be clearly defined. There is also a need to provide gender-needs analysis in the sector as the basis for preparation of strategic documents, by actively involving

organizations closely working with farmers, such as National Extension Agency and National Federation of Farmers.

- Considering the results of the economic experiment, that giving financial support to disempowered women would not necessarily help unless they are given more empowerment, we recommend the effects of the financial support in achieving economic and social empowerment of the women in agriculture and rural development to be measured, in order to better address the long-term economic and social empowerment of the women in agriculture and rural areas. The methodology should rely on behavioral and experimental economics methods, proved to be valuable tools to effectively improve the design and implementation of government policies and programs.



## PART V: APPENDICES

### ANNEXES: List of programs and measures for financial support in agriculture and rural development

Table 11: List of measures in the Program for financial support of agriculture (2013-2018)	Unit	2013	2014	2015	2016	2017	2018
Short name of the measure							
<b>Payments based on output (price aids)</b>							
Tobacco premium	Kg	x	x	x	x	x	x
Additional payments for vegetables for processing	Kg	x	x	x	x	x	x
Additional payment for fruits for processing	Kg	x	x	x	x	x	x
Payments for produced and sold wine grape	Kg					x	
Payments for production of cereal seeds	Kg	x	x	x	x	x	x
Payments for seedlings production	Piece	x	x	x	x	x	x
Milk premium	Litre	x	x	x	x	x	x
Payment for produced day-old chicks	Piece	x	x	x	x	x	x
<b>Payments based on area (per ha)</b>							
Area payment for field crops (M1.1)	Ha	x	x	x	x	x	x
Additional payment for field crops (addition to M1.1)	Ha				x	x	x
Additional payment for area under forage crops	Ha	x	x	x	x	x	x
Additional payment to M1.1 for rice and sunflower	Ha	x	x	x	x	x	x
Additional payment for cereals sown with certified seed	Ha	x	x	x	x	x	x
Add. DP for changing production orientation (cereals to F&V or vine).	%				x	x	x
Area payment for (M1.3) vegetables	Ha	x	x	x	x	x	x
Additional payment for vegetables	Ha	x	x	x	x	x	x
Area payment for vineyards (M1.6)	Ha	x	x	x	x	x	x
Additional payment for vineyards	Ha						x
Area payment for orchards (M1.7)	Ha	x	x	x	x	x	x
Additional payment for orchards	Ha						x
Payments for seed production	Ha	x	x	x	x	x	x
Payment for snail farming	Ha	x	x	x	x	x	
Payments for decorative and fast-growing seedlings	Ha				x	x	x
<b>Payments based on livestock number (per animal, hive)</b>							
Payment for cattle (M2.1)	Head	x	x	x	x	x	x
Additional payment for women cattle	Head	x	x	x	x	x	x
Additional payment for calves	Head	x	x	x	x	x	x
Payment for cattle slaughtered in registered slaughterhouse	Head	x	x	x	x	x	x

Add. Payments for produced and slaughtered cattle for beef product.	Head	x	x	x	x	x	x
Payment for sheep and goats	Head	x	x	x	x	x	x
Additional payment for sheep and goats	Head	x	x	x	x	x	x
Payment for sows	Head	x	x	x	x	x	x
Additional Payment for sows	%						x
Payments for pigs sold to slaughterhouse	Head	x	x	x	x	x	x
Payment for broilers and laying hens sold to slaughterhouse	Piece	x	x	x	x	x	x
Payment for newly housed laying hens	head				x	x	x
Payment for ostrich farming	head	x	x	x	x	x	
Payment for registered wintered bee hives	hive	x	x	x	x	x	x
Add. Payment for bee hives included in queen-bee selection progr.	hive			x	x	x	x
Payment for increased herd size	%						x

**Table 12: List of measures in the Program for financial support of agriculture (2013-2017)**

Measure (short name)	2013	2014	2015	2016	2017
111: Training and information of agricultural producers	x	x	x	x	x
112: Aid for young farmers for starting agricultural business	x	x	x	x	x
114: Advisory services for development of agriculture	x	x	x	x	x
121: Investments for modernization of agriculture	x	x	x	x	x
122: Investments for increasing the economic value of the forests	x	x	x	x	x
123: investments in processing and marketing of agricultural products	x	x	x	x	x
124: Investments in infrastructure for development of agriculture, forestry and water economy	x	x	x	x	x
131: Economic association of farms for jointly performing agricultural activity	x	x	x	x	x
211: Aid for agricultural production in LFA	x	x	x	x	x
213: Aid to preserve rural areas and their traditional features	x	x	x	x	x
214: Aid for conservation the indigenous agricultural plant species and livestock breeds	x	x	x	x	x
215: Organic production	x	x	x	x	x
321: Improving the quality of life in rural areas	x	x	x	x	x
322: Village renewal and development	x	x	x	x	x
323: Preservation and improvement of rural areas and their traditional features	x	x	x	x	x

411: Supporting knowledge and skill for preparation of strategies for local development of rural areas	x	x	x	x	x
413: Realization of Strategies for local development of rural areas	x	x	x		
431: Encouraging local development of rural areas				x	x

**Table 13: List of technical support measures in the Program for financial support of rural development (2013-2017)**

Measure	2013	2014	2015	2016	2017
1.1: Organization and implementation of training programs not covered by RDP	x				
1.2: Organization and implementation of events and fairs	x	x	x	x	x
1.3: Participation to agricultural events and fairs	x	x	x	x	x
1.4: Aid for marketing of agricultural and agricultural processed products	x	x	x	x	x
1.5: Publishing educative, informational and promotional material	x	x	x	x	x
1.6: Implementation of research, analyses, project proposals, studies, and strategic documents in agriculture and rural development	x	x	x	x	x
1.7: Investments for establishing scientific demonstrative examples	x	x	x	x	x
1.8: Other costs and investments for establishing and implementation of the measures from DPP and RDP	x	x	x	x	x
1.9: Costs for development of geodetic reports		x	x		
2: Allocation of state-owned agricultural land for usage as social aid	x	x	x	x	x
3: Subsidized interest rate				x	x

**Table 14: List of measures in the Program for financial support of rural development (2013-2017)**

Measure	2013-2017
M101: Investments in agricultural holdings to restructure and to upgrade to Community standards	X
M103: Investments in the processing and marketing of agriculture and fishery products to restructure those activities and to upgrade them to Community standards	X
M302: Diversification and development of rural economic activities	x

**Table 15: Share of women in the realization of the direct payment program (2013-2017)**

Year	Total	Men	Women	Women (%)	Unknown
<b>Number of submitted applications</b>					
2013	76.464	51.074	10.614	13,88	14.776
2014	73.908	49.966	10.512	14,22	13.430
2015	76.839	52.233	11.593	15,09	13.013
2016	73.624	51.440	11.977	16,27	10.207
2017	70.303	49.748	11.865	16,88	8.690
Average	74.228	50,892	11,312	15,27	12,023
<b>Number of approved applications</b>					
2013	74.066	49.389	10.405	14,05	14.272
2014	71.696	48.418	10.280	14,34	12.998
2015	75.515	51.302	11.453	15,17	12.760
2016	71.283	49.781	11.631	16,32	9.871
2017	67.928	48.172	11.453	16,86	8.303
Average	72.098	49.412	11.044	15,35	11.641
<b>Value of approved applications(mil.MKD)</b>					
2013	3.379	2.500	342	10,12	538
2014	3.508	2.616	362	10,31	530
2015	2.913	2.152	336	11,54	425
2016	3.905	3.014	461	11,80	431
2017	3.812	2.969	474	12,43	370
Average	3.504	2.650	395	11,24	459
<b>Average value of approved applications(MKD)</b>					
2013	45.627,62	50.611,58	32.878,25		37.675,30
2014	48.929,79	54.035,32	35.196,54		40.773,02
2015	38.576,62	41.949,01	29.362,32		33.288,26
2016	54.787,62	60.543,07	39.610,29		43.645,44
2017	56.123,77	61.627,36	41.361,61		44.555,91
Average	48.809,08	53.753	35.682		39.987,58
<b>Submitted/approved ratio</b>					
Average	0,97	0,97	0,98		0,97

Source: data from AFSARD, and own calculation

**Table 16: Share of Women in the Realization of the Rural Development Program**

Year	Total	Man	Woman	W (%)
<b>Number of applications for the RD program</b>				
2015	1,633	1,240	393	24.07%
2016	5,323	3,660	1,663	31.24%
2017	662	426	236	35.65%
average	2,539	1,775	764	30.32%
<b>Value of Requested RD Investments (million MKD)</b>				
2015	931.72	711.68	220.05	23.62%
2016	1,961.47	1,312.30	649.18	33.10%
2017	387.03	247.84	139.20	35.97%
average	1,093.41	757.27	336.14	30.89%
<b>Number of approved investment for the RD program</b>				
2015	905	641	264	29.17%
2016	723	491	232	32.09%
2017	424	284	140	33.02%
average	684	472	212	31.43%
<b>Approved Value of the RD Investment (million MKD)</b>				
2015	437.75	299.73	138.02	31.53%
2016	174.94	111.07	63.88	36.51%
2017	247.06	165.03	82.03	33.20%
average	286.58	191.94	94.64	33.75%
<b>Average value per approved application (MKD)</b>				<b>difference</b>
2015	483.70	467.60	522,796.30	55,195.64
2016	241.97	226.21	275,324.81	49,119.76
2017	582.69	581.10	585,905.23	4,801.51
average	436.12	424.99	461,342.11	36,372.30
<b>Submitted/approved ratio)</b>				<b>difference</b>
2015	0.55	0.52	0.67	
2016	0.14	0.13	0.14	
2017	0.64	0.67	0.59	
average	0.44	0.44	0.47	

Source: data from AFSARD, and own calculation

**Table 17: Share of Women in the Realization of IPARD 1 (2013-2017)**

Measure	Number of applications				Total public expenditure in mil. MKD			
	Total	Men	Women	W (%)	Total	Men	Women	W (%)
<b>M101: Investments in agricultural holdings</b>								
received*	343	269	74	21.57%	219,58	186,12	33,46	15.24%
contracted	129	93	36	27.91%	34,62	25,65	8,97	25.92%
finished	106	77	29	27.36%	28,63	21,38	7,25	25.32%
<b>M103: Investments in the processing and marketing of agriculture and fishery products</b>								
received*	14	10	4	28.57%	107,13	50,64	56,49	52.73%
contracted	6	5	1	16.67%	90,31	53,10	37,20	41.20%
finished	6	5	1	16.67%	76,98	43,10	33,89	44.02%
<b>M302: Diversification and development of rural economic activities</b>								
received*	53	48	5	9.43%	135,22	110,21	25,01	18.49%
contracted	8	5	3	37.50%	43,06	41,29	1,77	4.10%
finished	4	2	2	50.00%	38,06	36,31	1,76	4.62%
<b>TOTAL, finished</b>	<b>116</b>	<b>84</b>	<b>32</b>	<b>27.59%</b>	<b>143,67</b>	<b>100,78</b>	<b>42,89</b>	<b>29.85%</b>

Source: data from AFSARD, and own calculation

**Table 18: Share of Women in the Realization of IPARD 1 (2013-2017)**

Measure	Total	Men	M (%)	Women	W (%)
<b>M101: Investments in agricultural holdings to restructure and to upgrade to Community standards</b>					
<b>No. of applications</b>					
received*	343	269	78,43%	74	21,57%
contracted	129	93	72,09%	36	27,91%
finished	106	77	72,64%	29	27,36%
<b>Total public expenditure in EUR</b>					
received*	3.570.438	3.026.306	84,76%	544.132	15,24%
contracted	562.920	416.995	74,08%	145.925	25,92%
finished	465.455	347.618	74,68%	117.837	25,32%
<b>Average value per application</b>					
received*	10.409,44	11.250,21	108,08%	7.353,14	70,64%
contracted	4.363,72	4.483,82	102,75%	4.053,47	92,89%
finished	4.391,08	4.514,52	102,81%	4.063,34	92,54%
<b>M103: Investments in the processing and marketing of agriculture and fishery products to restructure those activities and to upgrade them to Community standards</b>					
<b>No. of applications</b>					
received*	14	10	71,43%	4	28,57%
contracted	6	5	83,33%	1	16,67%
finished	6	5	83,33%	1	16,67%
<b>Total public expenditure in EUR</b>					
received*	1.742.000	823.404	47,27%	918.596	52,73%
contracted	1.468.401	863.453	58,80%	604.948	41,20%
finished	1.251.775	700.753	55,98%	551.022	44,02%
<b>Average value per application</b>					
received*	124.429	82.340	66,17%	229.649	184,56%
contracted	244.734	172.691	70,56%	604.948	247,19%
finished	208.629,17	140.150,60	67,18%	551.022	264,12%
<b>M302: Diversification and development of rural economic activities</b>					
<b>No. of applications</b>					
received*	53	48	90,57%	5	9,43%
contracted	8	5	62,50%	3	37,50%
finished	4	2	50,00%	2	50,00%
<b>Total public expenditure in EUR</b>					
received*	2.198.671	1.792.035	81,51%	406.636	18,49%
contracted	700.113	671.406	95,90%	28.707	4,10%
finished	618.928	590.357	95,38%	28.571	4,62%
<b>Average value per application</b>					
received*	41.484,36	37.334,06	90,00%	81.327,20	196,04%
contracted	87.514,13	134.281,20	153,44%	9.569,00	10,93%
finished	154.732,00	295.178,50	190,77%	14.285,50	9,23%

Source: data from AFSARD, and own calculation

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