

# **An institutional analysis on the management of a Namibian women's cooperative<sup>†</sup>**

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## ABSTRACT

Marula is one of the traditionally used multipurpose fruit trees in the North Central region of Namibia. A traditional custom rule regulates access to marula fruit and its processing into alcohol, which is a gendered collaborative activity for local women. After the abolition of apartheid the Namibian government helped establish the Eudafano Women's Cooperative (EWC) for the commercialization of marula crude oil, which is sold to two foreign customers through trade contracts designed to increase the income of local women. The study presented here is an institutional analysis of the EWC cooperative that uses Hagedorn's Institution of Sustainability analytical framework and Williamson's four level model of economic institutions to order the analysis, complemented by reference to power relations and different rationalities following Hebert Simon. This allows us to understand mechanisms of institutional changes caused by interactions between cooperative institutions designed under a Western context and customary rules operating under an African context. Following Charmaz, grounded theory with abduction was employed to guide data collection. Qualitative data are drawn from a combination of document surveys and interviews with 31 individuals and a number of villager groups during fieldwork in Ovamboland Namibia in 2011. This study first summarizes the organizational model of the EWC as designed institutional performances. Parallel to these intended institutional changes, we found six institutional changes that were either designed but not generated or generated in unintended ways. Among these, we found, for example, that formal cooperative membership rules and decision making rules were substituted with rules-in-use based on local social norms; that labour with machine in the EWC factory was male dominated, reflecting local social beliefs regarding labour allocation and that correlations between wealth, education and authority resulted in the secretary of the EWC being able to use privileged access to EWC transportation to access the better quality fruits. We also observed changes the valuing of marula based economic activities and in rules regulating marula fruit collection at the village level, with some husbands of the EWC members collecting fruit in spite of a traditional norm prohibiting this. Findings in this study suggest that there remains much work to be done before stable management of the EWC is serving the original design aims of the cooperative, to serve as a motor to reduce poverty and malnutrition problems in Namibia.

**KEYWORDS:** power, cooperative, Institutions of Sustainability, gender, marula

## INTRODUCTION

### *Background*

Marula (*Sclerocarya birrea*) is one of the traditionally used multipurpose partly domesticated fruit trees in Southern Africa (Shackleton, et al. 2003). In the North Central region of Namibia, called Ovamboland, traditional custom rules of the Ovambo ethnic group regulate access to marula fruit and the processing of its meat for alcohol production. This is a gendered collaborative action of local women. Part of the processed alcohol is given to the traditional authorities, a hierarchical structure composed of crowns, traditional councillors, and headmen, and the rest is distributed among women participating in the alcohol production. As a residual of alcohol production, kernels in the marula fruit nut are further individually processed for oil. All three fruit products, alcohol, nuts or kernels, and oil are bartered or gifted among villagers. These traditional custom rules have remained in spite of the dynamic changes in social contexts through four main events; the German colonial era, occupation by South Africa, the Cold War, where Angola had been on the side of Soviet Union and South Africa on the side of the United States of America, and civil war between the Ovambo group and the South African government.

After the independence of Namibia from South Africa in 1990, the abolition of apartheid meant that independent economic activities of the Ovambo were allowed. This period saw expansion of urbanization and of commodification of marula fruit products (Den Adel 2002). In 1996, the Eudafano Women's Cooperative (EWC) was established at the initiative of the Namibian government with support from a consultant NGO, the Centre for Research, Information, Action in Africa (CRIAA) and the German agency, Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GTZ). The EWC aims to achieve commercialization of marula crude oil as an indigenous natural product used as a raw material in cosmetics, in order to increase the income of local women (Du Plessis 2006, 1). Due to its high rate of fatty acid composition, marula oil has a strong resistance to oxidative rancidity (Burger, De Villiers and Du Plessis 1987). Oils are transferred overseas to foreign customers at a premium for inclusion in two cosmetic value chains through two trade contract schemes; the Community Trade Programme contract provided by the Body Shop UK since 2000 and an ABS (Access to genetic resources and Benefit Sharing) contract<sup>1</sup> with a French cosmetic company Aldivia as well as the Namibian Ministry of Environment and Tourism in cooperation with the Ministry of Agriculture, Water, and Regional Development since 2005 (PTA and Aldivia 2006; the Body Shop 2007, 40ff.). In the same year with supports from the Namibian government and CRIAA, the EWC established the EWC factory for the production, storage, and exports of marula crude oil and also alcohol production for the local market.

#### *Aims of the research and analytical framework*

In order to ensure access to additional value associated with this claim for property rights on the products of the EWC, management of economic activities of the EWC is designed to build a sustainable value chain for marula plant oil products. This study aims to explain challenges in the management of the EWC with an institutional analysis focused on the mechanisms of actor's choices of economic actions under interactions between designed cooperative institutions, developed in Western social context, and Namibian social norms operating in an African context.

In order to explore these mechanisms, this study adapts Hagedorn's Institutions of Sustainability (IoS) framework (Hagedorn 2008), which depicts the conceptual structure of institutional changes with four decomposed elements: transactions, actors, institutions, and governance structures, and the action arena where they meet. The IoS analytical framework provides logical explanations for the structure of interactions between social and ecological systems and makes it possible to talk about the regulations of human affecting the interdependencies between both systems (Hagedorn, Arzt and Peters 2002). The IoS sets transactions as a unit of analysis, proposing that these craft coherence within the interconnectedness between human actors and nature system (Hagedorn 2008, 361f.). Four types of transacted elements are explored in this study: (i) marula fruit products of alcohol, marula kernels, marula oils, (ii) money, (iii) information, and (iv) entitlements of property rights. Institutions are understood here as "the humanly devised constraints that shape human interactions (North 1990, 3)" and are presumed to include both formal constraints like laws and informal constraints such as norms of behaviours. Following Williamson's four level model of economic institutions (2000), mechanisms of changes in economic institutions can be explained through reference to interactions across four realms under a vertical relationship: (i) economic situations of social embeddedness composed of religions and

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<sup>1</sup> The concept of ABS contracts has been developed in the spirit of the third objective of the United Nations Convention on Biological Diversity (UN 1993; CBD, Article 1) and institutionalized as the Nagoya Protocol of the UN-CBD (UN 2011).

traditional norms, (ii) economics of property rights, (iii) institutions of governance, and (iv) resource allocations. Governance structures are systems of rules and instruments that serve for the enforcement of the rules (Williamson 1975). A cooperative can be understood as a hybrid governance structure of hierarchy and markets (Ménard 2004), under which transactions of economic activities are regulated by two institutions: its own constitutions and the relevant national law (Henehan and Anderson 2001, 3).

Based on the combination of these frameworks, we explore the implementation of ABS in Namibian marula trade using a concept of power from Hebert Simon (1959), understood as a determinant of institutional changes in cooperative management. Reference to bargaining power and bounded rationality help us understand two types of institutional change; designed but not generated and generated in unintended ways that change asymmetrical power relations between actors. Bargaining power is the ability of economic actors to achieve outcomes that favour their specific distributional interests (Farrell and Knight 2003, 544) by convincing other actors of possible action choices.

Conventional economic methods tend to set a premise that economic phenomena have the regularity of a closed system, based on which these phenomena can be explained by parsimonious theories. However, this study takes a position that the actual economic phenomenon do not always contain such regularity. Rather actors select choice, based on intentions, customs, impression, etc. Each actor recognizes only a limited scope of the structure of the world. Each actor holds limited cognitive abilities or rationalities for choices of economic actions (Simon 1979). In particular for the understanding of economic activities in studied area, it is necessary that we consider its historical development of colonial and post-colonial eras. African states are combination of Western institutional sets, introduced under colonial rule, and social rules under African traditional social systems (Chabal and Daloz 1999, 9). Therefore, rationality and concept of efficiency in contemporary African economics are often different from those defined in European economic theory (Fafchamps 2004). Referring to the concept of bounded rationality (Simon 1979), the individual rationalities of the actors potential applies in our study include the impossibility of acquiring unlimited knowledge and difficulties processing information provided from European cultures. Bounded rationality here then is as differences in rationalities between actors under asymmetrical power relations in the studied region and also between European and African governance contexts.

## METHODS

Keeping in mind postcolonial African economic theory, this study respects the significance of analysing systems of human thoughts and images, which can be understood as analysis informed by culture or, to use the term of Foucault (1979, 48f.), discourse. Analysing discourse within the scope of this research is a method to explore economic phenomena under social, political and historical contexts. Following Charmaz (2006, 188), a methodology of abduction reasoning is used to craft the most plausible interpretation of data through the deliberation of all possible explanations occurring to the research. Based on Strauss's concept of grounded theory which can be understood an application of Peirce's concept of abduction (Peirce 1987 In Bryant 2009), this study adopts a grounded theory approach of abduction (Charmaz 2006 and Reichertz 2007), which enables us to analyse data to find perspectives by linking found categories from coded data and providing explanations of analysed social phenomenon as a results of data interpretations.

The qualitative data were collected through a combination of document surveys of the EWC and of marula uses in the study area as well as semi-structured and unstructured interviews, during fieldwork in Windhoek, the capital, and in the North Central region of Namibia in 2011. The data on designed cooperative institution rules-in-form were based on three state rules: the Namibian Cooperatives Act No.23 (Government of the Republic of Namibia 1996), the Namibian National Cooperative Policy (Government of the Republic of Namibia 1992), and the Vision 2030 (Government of the Republic of Namibia 2004). Based on these rules, the EWC has its own constitution. However, this study substitutes that with a general model by-law (DCD 1997), which is used as a base of all Namibian cooperative constitutions, complimented by data drawn from interviews both in the capital Windhoek and the study area. These data are further complemented by reference to studies specifically concerned with the social and political context within which EWC has come into being, including Den Adel (2010), Sullivan and O'Regan (2003), and Shackleton, et al. (2003). Based on these data, a total 44 individuals were interviewed in the course of 31 separate interviewing events, most individually, some in groups. Individual interviewees included Ovambo villagers, secretaries and factory workers of the EWC, employees of CRIAA, of the Namibian Ministry of Agriculture, Water, and Forestry, of the Ministry of Environment and Tourism, and also two employees of the Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ). Five group interviews were conducted with three separate women's associations affiliated with the EWC and one group interview was also conducted with the two employed secretaries of the EWC. Interviews with villagers and women's associations were conducted through local interpreters familiar with marula culture in the studied region.

Data were analysed by coding texts with the aim to extract concepts and categories, which were sorted into three of the four decomposed elements of the IoS framework; transactions, governance structures, and institutions. Links between them were then logically explained as institutional changes, using the IoS framework. Through these processes concepts of power asymmetries and bounded rationality observable in the case were formed.

## RESULTS

### *Organizational model of the Eudafano Women's Cooperative*

In order to distribute management functions as a producer cooperative, the EWC divides its organizational structure into two hierarchical levels: the upper level of the company and the cooperative divisions and the lower level of EWC member organizations of women's associations. Each natural female person belongs not to a division but to a women's association. The recent total number of EWC members is around 3500 to 5000 in 25 constituencies in four regions in the North Central region of Namibia (Den Adel 2010).

The cooperative division is regulated by its own constitution as well as the three above mentioned state rules. It is composed of a board with administration function and two employed secretaries (Government of the Republic of Namibia 1996), under which transactions between women's associations are regulated. Decision makings on cooperative activities such as a business plan, annual financial statements, and election of board are served by general meetings of EWC members. This division is the owner of the company division, which is registered as a private firm *Eudafano Women's Cooperative Ltd*, regulated by the Company Act. The company division administers EWC business activities, such as collection of marula kernels from members by trucks, production of oils in the EWC factory, and management of storage and trades of marula crude oil. Each women's association of the

EWC has a board as its leading administration and general meetings serve that decision making place, independent from both of divisions.

Following the transaction flows, which is the unit of analysis of the IoS, the value chain of marula-oil based products produced by the EWC can be summarized in Figure 1. Using the language of the IoS, the designed institutional set of cooperative and business contracts provides institutional performances, crafting new transactions of three main components; kernels and oil as marula fruit products, money traded-off with these products, and information on domestic marketing, parallel to international market, which are the next target of the EWC with new oil products under development in stand of 2011. Kernels, produced by members of women’s associations are purchased and processed by the company division of the EWC, further sold as crude oil mostly to foreign cosmetic producers. A part of the sales of oils, paid from cosmetic producers to this division, are paid to the cooperative division distributing to dividends for the shareholders of the EWC Ltd. after deducting its costs, and going eventually to local women as dividends or bonus of cooperative members. Due to a tendency of local women to be illiterate and innumerate, transactions related to cooperative activities at the women’s association level are regulated by chairs and secretaries.

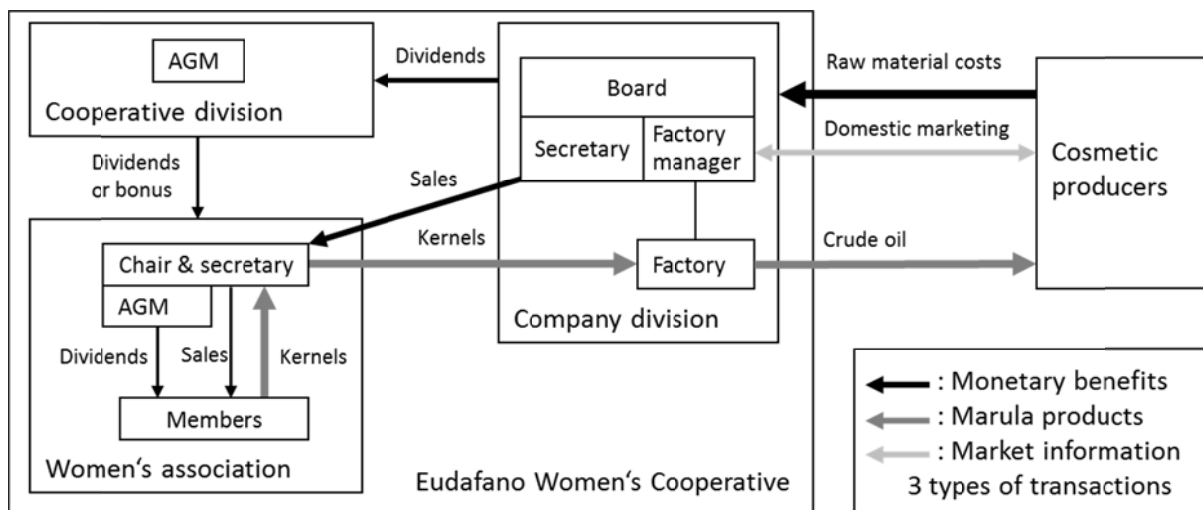


Figure 1: Transactions in the Eudafano Women’s Cooperative  
Source: own figure

#### *Six kinds of changes in economic institutions*

This study found six kinds of changes of economic institutions, associated with establishment of the EWC in Ovamboland. Two of them are regarding rules of membership in EWC activities and decision makings. Although the EWC constitution admits those who paid membership fees as its member and several actors provide administration supports for EWC members, this study finds that this is substituted by a rules-in-use. Attendance to cooperative meetings is the significant determinant to keep the membership, regardless of whether one has sold marula kernels to the EWC or made payments of membership fees. In addition there is also a practiced honour membership for dead persons or ex-members, which was also not designed in the formal cooperative rules.

In terms of its decision making rules, designed in a democratic way, members adopt a social norm that the illiterate poor follows decision initiatives of the literate and skilful rich, who tend to own the infrastructures required for economic activities, such as meeting rooms or transportation. The property of juice extraction machine was even transformed by rich

EWC members into their own private property, although these were initially purchased as common property of all members. The same tendency can be seen in the fact that the literate rich members were repeatedly re-elected as board members of the EWC. They have been responsible for its management over nine consecutive years, which is in contradiction to the cooperative law.

The second group, now of four changes, refers to rules in EWC employment and property rights on access and uses of marula fruit. Although the aim of the EWC is to provide gendered income opportunities for local women, five out of seven technical workers of the company division, such as factory workers, are male. There are also asymmetrical relations in EWC positions, in terms of access right to marula fruit resources. Due to administrative obligations, the secretary of the EWC has access to EWC transportation, which enables her to collect marula fruit with good quality from villagers who are not members of the EWC or whose fruit are plentiful so that they are willing to share them freely.

In terms of human capacity, the literate and skilful board members tend to leave the EWC for better paid-work and youth are not interested to participate in the EWC resulting in a lack of human capacity on management boards. Considering the social context of the studied region, rapid expansion of urbanization increases opportunities of well paid-non-agricultural job; on the other hand, technical limits to mass production of marula restrict resource obtainment as large scale marula farming has proved hard to achieve<sup>2</sup>. The resignation of skilled and rich members creates an image of the EWC as an activity for the poor among local people. In addition, urbanization alters life style preferences of the youth who stay in towns. Less involvement of these two groups literate and youth in the EWC, results in difficulties for cooperative management.

Regarding rules in marula fruit collections at the village level, it was found that the introduction of the EWC invites alterations. A traditional customs norm restricts collecting and processing marula fruit as gendered work only for village women. This rule strongly prohibits men from even coming close to trees during the harvest. However, this study found that some husbands support their EWC member wives of not only by sharpening knives but also by collecting fruit.

## DISCUSSION

As results of the implementation of the cooperative and trade contracts, we discuss here, using the IoS framework, the changes in uses of three marula fruit products; kernels, oils, and alcohol, understood here as three action arenas, summarized in Figure 2, with repaid to the six found changes mentioned above.

### *Action situations on marula fruit products*

The implementation of the EWC crafts the co-existence of three institutional performances for local women to regulate transactions of marula fruit products; barter exchange and gift giving structures for transactions of goods and social capital, regulated by traditional customs rules; local market exchange for transactions of commodities and money, regulated by market rules; and the EWC as the combination of hierarchy and markets for transactions of commercialized goods and money, regulated by cooperative rules. From the demand side, two types of transacted goods—kernels and oil—are both traded under market competition.

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<sup>2</sup> It takes at least ten years until bearing fruit and plantation with grafted seedlings is still under experiments in 2011.

The commodity of kernels is a material for own production of oil, of the processed oil produced by the EWC, and of hand-made oils produced by other local women in traditional ways. At present, marula oil from the EWC are much more expensive and amounts smaller, as compared to what is manufactured by local women; therefore, there is very little market competition<sup>3</sup>. From the supply side, this leads to less choice problems for the EWC to sell processed marula oil as commercialized goods for local consumption or trade, leaving the focus on its biotrade contracts. At the level of individual local women, we can understand that a selection of transaction channel has implications for their production costs and influences potential monetary benefits, in particular potential income increase from the sales of kernels toward sale to the EWC, or hand-made oil on the local market. In the case of kernels sale directly to the EWC, there is also a non-monetary benefit of the accumulation of social capital, as a result of join in the EWC. At present, the EWC's purchase price of kernels and the local market price on hand-made oil are not different enough to motivate changing their behaviour. Following the present status of EWC that sales to foreign markets has not increased and a product diversification plan of the EWC with new edible oils is under development as a contribution towards solving domestic malnutrition problems, if the product price can be lower and income of villagers increased, in light of the rapid expansion of urbanization in the study region; EWC edible oil might be competitive with hand-made oil goods in future, which could alter the present transaction of kernels and oil.

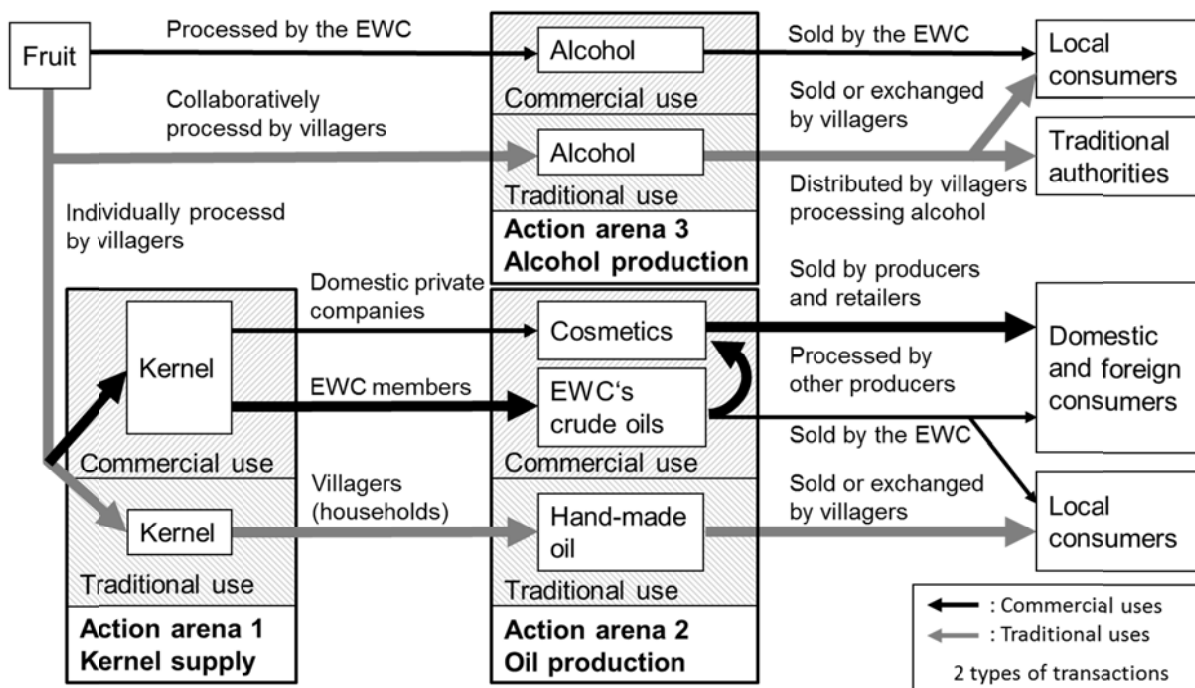


Figure 2: Three action situations of kernel supply as well as alcohol and oils productions  
Source: own figure

Using the language of the IoS, an action arena of uses of marula alcohol can be understood to be shaped not only by the above with three institutional performances but also by traditional laws under traditional hierarchy, regulating transactions of marula alcohol as gifts (or non-monetary tax) from local women to traditional authorities, which in return provide administration services to villagers. The mechanization of producing alcohol was gradually introduced over the past decades; however, it was limited to urban areas where traditional

<sup>3</sup> The EWC sells oils for 15 Euros/Litre.



authorities do not have jurisdictions. Also fruit processing machines are expensive and so traditional production methods are still used by the poor. Furthermore, the mechanization of alcohol production is simply processing fruit meat, with kernels left for processing in oil production, as a residual product. Where the main product is oil, this leaves the local women with the traditional activity of processing fruit; therefore commercial oil production can be understood as harmonized with traditional uses of alcohol at present as well as in future, unless further mechanization is introduced.

*Institutional changes not implemented or crafted in unintended ways*

Two institutional changes were observed that are associated with the action situation of choosing decision making rules for the action arena of the EWC itself. First, although members did not change the cooperatives formal rules, which are designed based on Western precedent and require an economic relationship to EWC, their adherence to social norms of inclusion, in preference to the sales and fee paying rules of the cooperative, resulted in those cooperative rules being designed but without the intended institutional change being generated. The members' creation of alternative rules-in-use for EWC membership, which is extended to non-contributors and deceased persons, can be interpreted as an indication that EWC members do not hold the same rationality as that which underlies the concept of cooperative used to design the EWC. They adopted for EWC social norms that which can be observed in rules of their local village organizations for social activities, including marula fruit processing. Differences in rationalities between the Western and Namibian contexts can also be observed in the country's Cooperative Act, which stipulates that annual membership fees can be substituted for a share system, distributing equity capital in a cooperative [Government of the Republic of Namibia 1996: Cooperative Act, Art 50.2 (a)]. This can be understood as an attempt to explicitly link the rationality of shareholders rights and duties to the practice of cooperative building. Second, in spite of it having a formally democratic decision making structure, the rules-in-use shaping decision making *within* the co-operative reflect members' consideration of asymmetrical power relations under their social context as their tacit knowledge (Hodgson, 2002) regarding who knows best. Local society in the study region distinguishes between the rich and the poor in a strong hierarchical structure, which affords bargaining power to the upper layer of the rich members over the poor, including in the taking of decisions within the co-operative. Here again, cooperative rules were designed but without the intended institutional change having been generated.

The other four observed changes can be understood as the generation of new rules, which were not intentionally designed as part of the cooperative but came about as a direct result of establishing it. First, within the action arena of oil production, EWC employs skilled individuals to operate machinery. However here the concept of a women's cooperative is interacting with a cultural norm regarding gendered labour allocation, manifest in the habituated consideration of local people, what Haugaard (2003) terms a system of thought, in which labour with machine is a male dominated activity. This manifests in limited availability of female labour for operating EWC's machines, crafting an action situation for employment in which male workers are selected for the core activities carried out by the women's cooperative, changing the institutional structure of the EWC in the process.

Next, within the action arena of kernel supply, we observe the introduction of addition rules concerning allocation of a property rights among EWC members, with secretaries having privileged access marula fruit of good quality. Here we may say, following Bromley (2006), that allocation of transport vehicles to some EWC employees generated an unintended institutional change in the regulation of access to marula fruit. The rule that

secretaries had access to transport lead to the adoption of a second rule, that they enjoy privileged access to the best fruit, while other members, lacking independent access to transport experienced an increasing power asymmetry as those already in superior hierarchical positions took advantage of their access to the EWC transport.

We also observed changes in the economic institutions associated with the action arena of marula fruit processing for alcohol production, which appear to have been taking place over a longer time scale, but may still be related to establishment of EWC. Recent urbanization in the studied region has increased the flow of money and goods in the village economy and also the opportunity for comparatively well paid-non-agricultural jobs. In addition, it has altered the beliefs and values of villagers. Of relevance to the present study is a decrease in the social value assigned to processing marula for alcohol and the relatively low economic value of keeping EWC membership. In some cases the keeping of fruiting trees is no longer valued at all and these are cut down, in contradiction to local custom. Here we observe institutional change at the social embeddedness level of Williamson's framework, with influence at the level of labour allocation, where we find decreased motivation among the rich and among the youth to choose to take part in marula related labour activities.

Finally, once again associated with the action arena of kernel supply, this time at the village level, as opposed to at the level of EWC, we observed change in the institutions regulating involvement of men in marula harvesting. Here economic incentives can be understood to have caused changes at the labour allocation level, with men intervening to increase household income through participation in EWC nut collection activities, in spite of the risk of moral sanctions of other villagers and an ethical code prohibiting male involvement with fruiting trees. This in turn motivates EWC members who are fruit tree owners to allocate access rights to their tree's fruits not to other local women, as in the past, but to men from her own household. The habituation of this change in practice among villagers could lead to further substitution of male for female labour in marula processing, since there is a norm in the study region that males should do the activities for which there is an income. Here the new practice of male involvement in fruit collection may be understood as the imposition of one action situation onto another, where the male privilege to engage in income generating labour has led to a reallocation of property (access) rights, biased in terms of gender in the opposite way that was hoped for when EWC was founded. Referring to Howard (2003), this is a matter of some concern, as it has already been observed that changes in property rights institutions can reduce gendered knowledge regarding in-situ resource conservation of marula, since this can lead to loss of social capital created by interdependencies of local women regulated by a rule to share marula fruit, and diminished economic value of the EWC products, which are intended to represent a contributions to enrich traditional cultural life.

## CONCLUSION

This study has explored institutional changes in how resources and labour are allocated following establishment of the Eudafano Women's Cooperative (EWC) in Ovamboland in northern Namibia. . We have employed the concepts of power asymmetry and bounded rationality, combined with Hagedorn's Institution of Sustainability framework and Williamson's four level model of economic institutions in order to explore interactions between the formal institutions of the EWC and local social norms, all of which help to shape the general an action arena of the EWC itself, and the sub-arenas of alcohol production, marula kernel supply, marula oil production. We have observed both intentional and unintentional crafting of new rules which can be understood to be caused by and creating new

asymmetrical power relations among actors in the study region. The adopted framework provides us with an analytical basis for evaluating the extent to which the designed cooperative institutions have been successfully implemented, which is a prerequisite for ensuring the additional value of the biotrade products made with EWC marula oil, which are sold on the world market. Findings in this study suggest that there remains much work to be done before achieving stable management of the EWC, in keeping with the design objectives that motivated its establishment, for it to serve as a motor to reduce poverty and malnutrition problems in Namibia.

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