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The reserve fund: Is it a necessary anchor for a successful cooperative?

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ABSTRACT

A significant number of cooperatives in the world have a reserve fund. Among cooperative members and leaders as well as researchers, a reserve fund is considered as an indispensable tool for the maintenance and success of the organisation. This article analyses the essence of reserve funds and their operation. It is demonstrated that the existence of this specific fund constitutes a deterioration in the quality of service provided by the cooperative to its members. It is suggested that the absence of reserve funds in a cooperative leads to an increase in the quality of service provided to members. Two case studies of rural primary cooperatives (moshavim) and one of secondary cooperatives (regional purchasing organizations) in Israel are presented. These associations have been operating successfully for a number decades without profit or deficit and do not maintain reserve funds. The cooperatives are founded by and for members who want to pay the lowest possible cost of participation, and the case studies demonstrate that they can operate efficiently and stably over time without relying on reserve funds.

1. Introduction

The reserve fund is a fundamental financial component of cooperatives and it exists in a significant number of cooperatives around the world. This fund, based on the investment of fees that are deducted from the cooperative's annual surplus (Cooperative societies, 1933;[1] Registrar of Cooperative Societies, 2014), should enable the organization to withstand changing economic conditions and support its working capital, especially in times of economic crisis (Jones & Svejnar, 1985; Zeuli & Cropp, 2004). Sometimes this fund is used to cover current losses and to finance the establishment of fixed assets.

The purpose of this article is to examine whether the reserve fund is essential to the successful existence of the cooperative and whether a cooperative can prosper even without maintaining such a fund. We know that a cooperative's goal is to serve its members in the best possible way while maintaining the lowest possible participation costs (Aresvik, 1955; Hirsch, 1950; Trifon, 1961). The article also discusses the mechanism by which a reserve fund is established and how it is effectively financed. Additionally, the term "cost of members' economic participation" in their cooperative and its goal in establishing the surplus and the reserve fund is discussed. It is then proposed that it would be better for members for the cooperative to operate at cost. In other words, the aggregate costs of all members' participation should exactly cover the total costs of running the cooperative of which they are members and nothing else. This policy, if applied, would not create surplus or losses.

The importance of this paper is that it claims that cooperatives can exist without a reserve fund, a claim that has not been discussed widely in the literature to date. Moreover, the paper presents the idea that reserve funds are not a necessity for the success of cooperatives or for the benefit of members. It also reveals that members pay for the creation of the reserve fund, but the fund does not belong to them individually, and in many cooperatives, in case of decooperativization, the allocated capital to be distributed to members does not include the value of the reserve fund.

The cooperatives presented in this paper differ from others in two major characteristics. The first is the fact that members are full individual owners of their cooperative and that the ownership rights express the real value, in market value including inflation, of the cooperative at all times. The second distinction is that the cooperatives presented here operate at cost and do not create annual surplus or loss in their economic and financial activities. In other words, these case studies show successful rural agricultural cooperatives operating without reserve funds. This means that the cost of participation to members is diminished. The view presented here suggests that cooperatives are established by their members for the purpose of receiving the best possible service at the lowest possible cost of participation.

The article is based on archival sources, interviews with cooperative members and leaders and government officials in Israel. The ability to locate written archival sources was limited, due to the fact that the archives of the organizations studied in this paper are not public. So in addition to the academic literature utilized as appropriate background,

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[1] The words Society and Association are interchangeable. The term Society is used here only when it appears in the official name of a cooperative.

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the paper is based on the information provided in interviews with leaders of the cooperatives presented in the case studies. The article begins with an explanation of the essence of the reserve fund, followed, in Section 3, by the financial structure of the cooperative and its annual surplus. The fourth section presents case studies of successful co-operatives in Israel that have neither annual surpluses and nor a reserve fund. The fifth section concludes with our ideas about the reserve fund and its current purpose in the operation of a cooperative organization.

2. What is a reserve fund and what are surplus and deficit?

A cooperative reserve fund is designed primarily to deal with unforeseen events affecting the cooperative's operation such as unexpected deficit (Kennedy, Jermolowicz, Lambert, Reilly, & Rotan, 1995). During the first half of the previous century, the debate over the nature of cooperatives introduced the idea that members should be permitted to create funds for various purposes such as production financing, working capital, sinking funds and a reserve fund. Amounts accumulated in these funds would be part of the cooperative's equity capital and would not be allocated to members in circumstances of decooperativization.

Discussions concerning agricultural cooperatives defined the reserve fund as a form of financial support to the organization, and co-operatives were encouraged to increase the transfer of capital to these funds (Ananiadis, Notta, & Oustapassidis, 2003). Annual surplus was created by members participating unequally, each one with a different rate of activities, in the cooperative's annual economic activities. Out of this surplus the reserve funds were created. Among other purposes, this fund would serve, after years of existence, future members who had not participated in the cooperative's financial creation (Jones & Svejnar, 1985). It can be seen that this situation could lead to inequities in levels of investment in the cooperative, which might in the long run lead to a process of decooperativization.

Many cooperative leaders and members think that reserve funds are indispensable to the existence of a successful cooperative. An alternative approach, contrary to the approaches described above, is seen through the existence of successful cooperatives without reserve funds at all. In Israel, legislation concerning cooperatives does not permit the existence of reserve funds in cooperatives (Shtern, 2014). The regional purchasing organizations in Israel, such as Granot and Emek Beit Shean, are second-level cooperatives that do not own reserve funds, but do have their own equity capital funds, which are crucial financial resources that belong entirely to their members (Bader, 2013; Bengio, 2014).

This article describes a cooperative structure, mainly in Israel, that contains two components. The first is the members' commitment to finance the construction of the cooperative's fixed assets by paying their share of the capital, thus having full individual ownership of the organization. The second is the members' commitment to participate economically in their cooperative's activities and thus to finance, entirely and exactly, the operations of the cooperative. The mechanism that activates a cooperative is the financing derived from the economic participation of the members. This participation is not equal; each member participates financially according to their needs. The formula is simple: the aggregate of members' costs of participation is equal to the total cooperative operating costs. When members are charged by their cooperative with a cost of participation higher than the transaction costs of the cooperative, then a surplus is created (1996, Galor, 1994). The bookkeeping department of the cooperative makes calculations for each period, generally on a monthly basis. Only a portion of the annual surplus is returned to members as a patronage refund. The rest of the surplus, and this is common in most cooperatives worldwide, is directed by the cooperative into various purposes (Adcock, 1948), such as an education fund, financing fixed assets and payment of dividends to members.

Creation of surplus in a cooperative, as recommended by the ICA, (International Cooperative Alliance) results from increasing members' cost of participation, which some may argue lowers the quality of service they receive (Ladru Jensen, 1948; Tortia, 2007; Reynolds, 2014). In addition, it is important to clarify the term 'deficit' in the co-operative. Deficit exists when a cooperative undercharges its members for their participation costs. In cases where cooperatives face deficits because of market shocks, the practice in many cooperatives is to cover these deficits by utilizing funds from existing reserve funds. The outcome is that previous members' participation covers losses of current members. This appears to be a blatant injustice to members and a procedure that should be reconsidered, since this practice transfers capital accumulated in previous years rather than charging members for the real cost of participation. It is thus suggested that deficits should be covered by the actual members themselves during the same fiscal year and according to the individual's share of economic participation (Galor, 2015), thus adhering to a policy that deficit, from any cause, is the responsibility of current members.

3. The financial structure of the cooperative

Members' financing of the establishment of their cooperative can be executed in a number of ways (Dunn, 1986; Royer, 1992). Once the cooperative has been established, its financing comes from these sources: the acquisition of shares paid by members; the annual surplus; and external sources (Chomel, 2008; Mevellec & Labbe, 1983). Members' contributions have two goals: the first is the creation of the co-operative's fixed assets and the second is the financing of the co-operative activities. Members' contributions fund all the cooperative's financial needs.

A cooperative may obtain credit to finance the creation of its fixed assets. To finance the repayment of this credit, the cooperative charges its members. Each member's cost of participation includes a small surcharge. When accumulated from all members, this covers the amount due to the creditors on a monthly basis. A particular member's participation charge is calculated according to their share of participation in the cooperative's economic activities. Therefore each member pays toward the reimbursement of the credit on an uneven basis.

When a cooperative needs to develop its infrastructure, most of its financing comes from external sources, but the members, through their participation costs, fund the entire needs of financing. The members are charged each month by the cooperative in the aggregate amount of the required repayment. The members are the ones who finance the repayments of debts. Practically, this form of self-financing by members is invisible to them, as it is taken directly from the members' monthly participation costs. Thus the members finance the establishment of the cooperative's fixed assets and have responsibility for financing its activities.

3.1. Internal financing of a cooperative

In addition to reserve funds, there are other financing options based on the cooperative member's contributions. Financing can be done through the creation of equity funds belonging individually to members which can be distributed at will. An example of other means of internal financing is offered by Mondragon, a Basque cooperative in northern Spain (Gallego-Bono & Chaves-Avila, 2016). Each year, the surplus is distributed according to the following formula: 30% is allocated to community development and member education. The remaining 70% is transferred to a savings account for each member, available to them upon retirement. These accumulated funds are utilized by the Mondragon cooperative as a relatively cheap source of finance.

Some have argued that cooperatives must create and maintain an indivisible reserve fund that belongs collectively to members who have established the fund from their accumulated contributions (Corcoran & Wilson, 2010; Jones, 2007). However, the reserve fund does not necessarily support the successful existence of the cooperative and may have some negative effects. The creation of a reserve fund forces members to increase the cost of participation to generate an annual surplus, which then serves as the base of the reserve fund. In the event of decooperativization, the reserve fund resources are not distributed to members. This is justified as a precaution to protect the financial stability of the cooperative (Tortia, 2007). The idea is to utilize the reserve fund to cover eventual losses of the cooperative.

The experience of the public transport cooperative in Israel, which has been operating for almost 80 years, shows that the members' share has always been kept at its real value and those who have quit the cooperative or retired have received the real full value of their shares (Solel, 2011). Moreover, in the past, this cooperative had a useful practice to assist new members who were looking to finance the high cost of their share. Given the turnover rates, and its financial strength, it was easier for the cooperative to make contract with banks or other financial institutions, from which they received the necessary financing for incoming members as a long-term credit. In the books of the cooperative, it was recorded that the new member had fully paid their share in capital real value, and in the cooperative personal account of the new member, the amount was written as a debt, which was repaid each month from the member's monthly income. Through this process, the cooperative received the entire value of the share and the member had the obligation to reimburse the loan in monthly installments taken from his or her income. This mechanism enables cooperatives to obtain full financing from members' share capital, and enables members to pay the full value of their share in real terms, and to be able to pay it off in monthly installments.

3.2. External financing of the cooperative

The limitation applied by the third international cooperative principle (ICA, 2019) prohibits self-financing in most cooperatives, and thus creates the need to turn to financing by external sources (Ellerman, 2007). This limitation contains two major aspects: a) Members' share capital in the cooperative is of limited value. Over time, the real value of the cooperative's assets appreciates, but the value of the member' share capital does not. In addition, members are not individual owners of their own cooperative; b) This principle encourages cooperative members to create surplus, instead of running their enterprise at cost, as explained here (Galor, 2015). In practice, the principle encourages creation of indivisible funds, and although the funding is created through members' economic participation, in most cooperatives these funds do not belong to the members (Galor, 1997).

A common external source of financing is a bank loan in exchange for an adequate mutual guarantee of all members. Such loans are also secured by the system of guided credit. The guided credit is a governmental project where government guarantee is offered to village cooperatives in turn for the cooperative's agreement to join a particular project. This modality creates a tool that can be accepted by the bank or any other credit provider (Kislev, Lerman, & Zusman, 1991). Additional ways to create a mutual guarantee are through the cooperative's membership in a cooperative federation, on a national or regional basis (El-Gamal, 2007). Thus credit can flow to the cooperative and allows it to build its fixed assets, as shown by an Israeli case (Kislev, Lerman, & Zusman, 1993).

Additional sources of external funding can be government agencies and cooperative federations. Governments provide credit for cooperative development, particularly in rural and agricultural areas. In Israel this is called "directed credit" or "concentrated credit" (Kislev et al., 1991; Zebarski, 1967). The credit was directed to cooperative villages, moshavim[2] or kibbutzim, following presentation of an annual agricultural production programme demonstrating ability to repay the credit and leave an adequate margin allocated to the farmers. This programme required demonstration that all available means of production were being used optimally by the farmer-member. Following the approval of the production programme, the cooperative, kibbutz or moshav, had to contract a secondary input supply cooperative from which it was supplied credit for all the required inputs, and a secondary marketing cooperative that marketed annual production. This arrangement, even though it was in practice for a certain period of time only and no longer exists, ensured that the credit provider was satisfied that the loan was being well exploited and would be reimbursed by marketing the annual production. At the same time, the government proposed long-term credits for the establishment of fixed assets needed to expand production. Credit, directed or concentrated, exists also through cooperative federations throughout the world (Brochu, 2002).

This method of financing working capital to cooperative members ceased to exist in Israel at the beginning of the 1990s, following a crisis in rural cooperatives (Rosenthal, Carol, Lerman, Kislev, & Zusman, 1990). It stopped because the system depended on the existence of the cooperative entity of the moshav; funding was never given directly to the member-farmer. The decooperativization of the moshavim at the end of the 1980s caused the disappearance of this method.

4. Cooperatives without a reserve fund

The creation of a reserve fund in a cooperative is commonplace. Yet, in most cases of demutualization, when the net value of the cooperative's assets is supposed to be distributed among members, the reserve fund is not included in the distribution. This section presents case studies of successful cooperatives, in existence for decades, which do not rely on reserve funds, because reserve funds do not exist in Israeli cooperatives (Hagen, 2005). Without reserve funds, the cooperatives under study are able to charge members the lowest possible participation costs.

4.1. The yatziv cooperative in Moshav Be'er Tuvia

A moshav is a family farm cooperative village registered as a cooperative association. This form of rural cooperative was initiated in the early 1920s. The means of production, including land, are equally allocated to each household in each moshav, and the agricultural branches are designed in accordance with the physical conditions in each region. Initially, each member's farm was based on mixed farming, which allowed for year-round operation and spread of risks. Credit mobilization, purchasing of inputs and marketing of agricultural products were organized by the cooperative association. Another principle was a system of mutual aid designated to protect farmers in times of crisis, but also to express a moral concept of responsibility to community members. In recent years, significant changes have occurred in the moshav with decline in employment in the agricultural sector and weakening cooperation, and currently in most moshavim only a limited number of cooperative functions are still operative (Ben Dror & Sofer, 2010).

The Yatziv cooperative was founded in 2001 by 26 dairy farmers from Moshav Be'er Tuvia. This moshav, once considered a very powerful cooperative, had weakened during the 1990s, along with the rest of the moshavim in Israel, and only the water supply function continued to exist under the moshav cooperative association (Cohen, 2008). The weakening of the moshav cooperative association did not prevent members from continuing their agricultural activities, and most of them continued to expand their dairy farms. The average size of dairy barn in this moshav is among the largest on family farms in Israel (Cohen, 2008). Dairy farming in Israel comprises about 105,000 milking cows with yearly average yield per cow of 12,500 liters. In Beer Tuvia there are 6000 milking cows and cattle, and the yield averages 12,850 liters per cow for the 45 members of the moshav)Avieli, 2015; Livestock record, 2018). The major need of dairy farmers in Be'er Tuvia was the orderly daily provision of appropriate feed rations for the livestock.

[2] Plural of moshav in Hebrew.

Until 2001, the complete mix of fodder was provided by the feeding centre, which belonged to the moshav cooperative. When the co-operative ceased to fill this role, the dairy farmers were forced to find a solution based on the existing feeding centre infrastructure and they therefore established the Yatziv cooperative.

The Yatziv cooperative leased and renovated the feeding centre of Moshav Be'er Tuvia enabling supply of all necessary feed to members' barnyards at what is regarded as the lowest possible cost of participation, and without the creation of any surplus in its activities. This entire operation was developed without the creation of a reserve fund. This practice is commonly used in the majority of moshav type settlements today (Galor, 2015). Yatziv's total income, resulting from the sale of the complete feed rations for members' cattle and dairy cows, covers the total cost of running the cooperative without profit or surplus. Yatziv developed successfully as shown by the increase in the number of members, rising from 36 in 2008 to 46 in 2015, covering all dairy farmers in Moshav Be'er Tuvia. Today, this cooperative produces all the feed for 6000 dairy cows and 5000 cattle, calves and heifers in Be'er Tuvia and in neighbouring moshavim)Avieli, 2015). Complete feed rations are produced under the supervision of food and veterinary control engineers. The value of Yatziv's production of feeding materials to cattle husbandry in 2014 was 40 million US dollars (Avieli, 2015).

Unlike other cooperatives that have created non-divisible reserve funds, the Yatziv cooperative has created an equity fund, paid by all members according to their volume of production and owned fully by the members. Each member's share depends on the extent of their purchases from the cooperative. The equity capital members' fund is invested in the stock of raw materials necessary for the production of fodder and thereby the fund maintains its market value (Avieli, 2015). By comparison, in most cooperatives, reserve funds' capital is kept in savings or deposit accounts in banks, where the rate of net return is quite low, and in many countries it is below the rate of annual local inflation, so the cooperative's investment loses its real value due to the fact that it is eroded over time (Guinnane, Banerjee, & Besley, 1993; Pennacchi, 2006; Schaars, 1980; Wells, 1935).

Another financing issue concerning the establishment of the Yatziv cooperative was the need for initial working capital. The cooperative was able to receive a loan under the members' personal guarantee, as opposed to the mutual guarantee required of the moshav in the past, as each member used their own livestock farm as collateral. The size of each farm and the number of head of cattle in the farm determined the amount of fodder that each member purchased from the cooperative and indicated the amount of collateral each one was able to provide. The most important principle here is that the total real value of the Yatziv cooperative is equal to the aggregate real value of members' shares (Avieli, 2008). This is an interesting and instructive example of a cooperative that is owned completely and individually by its members and operates fully at cost, with the lowest possible cost of participation to members. It should be noted that if a member wants to leave the cooperative, he or she is reimbursed the real value of his or her share of membership, without risking the stability of the cooperative (Avieli, 2015).

The Yatziv cooperative is an example of a cooperative operating successfully without surplus, at cost and without a reserve fund over decades, with its number of active members growing, and production of cattle feed extending to neighbouring moshavim members as well.

4.2. *The Yofi shel Yerakot[3] cooperative in Moshav Ein Yahav*

Moshav Ein Yahav is located in the Arava valley, an arid region in the south of Israel, north of Eilat. It was founded during the 1960s and currently has about 120 family farms. It was established by second generation descendants of members of older moshavim in Israel and functions essentially like them (Galor, 2014; Schwartz, 1999; Sofer & Applebaum, 2006). Due to the climatic conditions of the region, members have used the relative advantage of being able to grow off-season vegetables and fruits, which ripen early because of the hot weather. A significant proportion of their produce is exported and the ability to reach out-of-season markets ensures them a relatively high price (Gal, 2015).

Moshav Ein Yahav evolved as a cooperative association, like other moshavim, based on several functions (Galor, 2015). Most of these functions have ceased to exist, including cooperative marketing. The Israeli economic crisis of the late 1980s and early 1990s did not spare Ein Yahav and its cooperative entity ceased to exist, along with most of its various functions. Members needed a solution for marketing their agricultural produce, which was and remains their main source of income. The solution was to set up a new cooperative outside of the existing moshav framework, with an emphasis on marketing fruits and vegetables for the local market. The "Yofi shel Yerakot" cooperative was created in 1994 (Gal, 2015).

Any member of Moshav Ein Yahav[4] has the right to join the new emerging cooperative without paying a membership fee or purchasing shares, and 114 members have joined. The only commitment of members is to market all their products solely through this cooperative (Gal, 2015). Due to its success, Yofi shel Yerakot expanded and it currently serves as a marketing agent for most farmers in the neighbouring moshavim in the Arava region without offering them membership. The members obtain market price for their products less the direct operating costs of the cooperative. The member pays only 1.7% of the market value of their products to cover operating costs, and this value is their participation cost. This provides the highest possible return to members for their efforts. Non-members also receive the market price but pay the cooperative 5% of the total value of products for marketing. Yofi shel Yerakot does not retain any surplus and all surpluses generated from the marketing of products are returned entirely in the form of a patronage refund to members (Gal, 2015).

The net surplus from the marketing of non-members' products is used by the cooperative to build its fixed assets, and over the years the cooperative has invested large amounts of capital in establishing various properties. Following are examples of how the cooperative has used these sums. In 2015, the cooperative established an equity capital fund owned individually and equally by all members, from the income derived from non-members. The cooperative's assets, which belong to all members of the moshav equally, include sorting sheds and cooling sheds, which are very important under the difficult weather conditions in the region. In summary, the cooperative was founded on a non-profit basis, it operates economically very well, and does not have a reserve fund, but rather operates highly effectively at cost (Gal, 2015).

4.3. *Regional purchasing organizations*

The discussion in the previous section focused on primary cooperatives. In contrast, regional purchasing organizations are defined as second-degree cooperatives, of which their members are primary cooperatives; in our case the members are rural settlements, kibbutzim and moshavim. In a sense, regional purchasing organizations are another example of rural cooperatives where members own the organizations individually and entirely. In Israel there are eight purchasing organizations, seven of which are regional and one at the national level. Each of the regional cooperatives has 30–40 members, which are primary cooperatives, kibbutz or moshav settlements. There are organizations where members, the primary cooperatives, have equal ownership, and there are regional purchasing organizations where ownership is based on the relative participation share of each member. It is

[3] "Yofi shel Yerakot" means beautiful vegetables in Hebrew.

[4] Member of the moshav = a household that owns a farm in the moshav. The number of farm owner households is equal to the number of members.

Table 1
Characteristics of the regional purchasing organization.
Sources: (Bader, 2015; Barak, 2014; Bengio, 2014; Erez, 2014; Kornberg, 2014; Rogel, 2014; Yitzhak, 2014).

Name of the organization	Founded	Number of members - kibbutz and moshav	Percentages of ownership	Equal ownership
Granot	1940	41	50% according to participation rate	50% equal participation
Mishkei Beit Shean	1946	16	4.23–7.6%	
Mishkei Upper Galilee	1946	35		Equal
Mishkei Emek Yizrael	1947	34		Equal
Mishkei Hadarom	1947	57	according to participation during the last 20 years	
Mishkei Hamifratz	1948	25	according to participation during the last 12 years	
Mishkei Hanegev	1948	54	50% owned equally. 50% divided according to participation rate	50% equal

important to note that the total value of all members' shares is equal to the total real value of the cooperative.

Table 1 presents the main characteristics of all seven regional purchasing organizations and their ownership structures. The regional purchasing organization Mishkei Beit Shean, for example, was founded in 1946, and is composed of 16 members all of which are kibbutz-type settlements. The different ownership share results from the number of years each kibbutz has participated in the cooperative's economic activities. The longer the kibbutz participates in the activities the higher the ownership share (Bengio, 2014). By comparison, the regional purchasing organization Mishkei Upper Galilee was founded in 1946 and has 35 kibbutzim members, all of whom hold equal ownership in its fixed assets (Barak, 2014). The kibbutzim who own the regional purchasing organization Mishkei HaNégev have equal voting rights in the cooperative, but the ownership share is uneven (Yitzhak, 2014). All the regional purchasing organizations refund the entire annual surplus earnings to their members.

4.4. The different activities of the regional purchasing organizations

The objectives and activities of regional purchasing organizations have evolved over the years, but they have always functioned without indivisible reserve funds, and following the directives of the registrar of cooperatives of Israel (Stern, 2014). The main objective of each regional purchasing organization is the economic success of its member-owners, the rural communities in all spheres where the organization operates. The first activity of these organizations is purchasing their members' household consumption needs. For example, the value of the total annual purchasing volume of Mishkei Hadarom's members was 700 million shekels in 2013 (nearly 200 million US dollars) (Yitzhak, 2014). The second activity is commercial. The organizations take advantage of their purchasing power to buy inputs for production much more cheaply than other suppliers, thus allowing their members (the kibbutzim) to benefit from these low prices (Bengio, 2014) and make their industries more profitable.

Some regional purchasing cooperatives also function as consumer cooperatives, which in addition to supplying all members' personal and family consumption needs and all the necessary inputs for production, be it agricultural or industrial, at cost, also supply financial services and include a savings and credit cooperative. This enables members to save their money at a competitive rate of interest, higher than alternative possibilities, and in this way the cooperative mobilizes funds from members. This is a cheaper option for the cooperative than alternative credit sources. It mobilizes additional required funds from external sources, at a lower rate of interest than that charged on the credit market, thanks to the competitive size of the cooperative. The next function is the marketing of the variety of produce sold by its members. The cooperative markets the produce at cost, meaning that the income goes completely to members after deducting the exact sum needed to cover operating expenses. All these important cooperative functions and activities are conducted in the framework of the regional purchasing organization, without a reserve fund and with proven success over the decades.

The regional purchasing organization Mishkei Beit Shean plays an important economic role for members in two main areas of financing and trade activities (Bengio, 2014). The first one is financing activities which include the provision of long-term loans to member kibbutzim through the establishment of appropriate credit frameworks. The revenues of the regional purchasing organization from this activity come from the difference between the interest rate on credit mobilized from banks, which is relatively low for the regional organization, and the interest rate charged to the member kibbutz. The regional purchasing organization charges the member kibbutz at the lowest possible rate, lower than the commercial loan rate charged by banks. The second role is concerned with the ability of the organization to create its own sources of funding. It should be emphasised that these funds are fully owned by the individual members. These organizations replace the role of the financial market and credit intermediaries.

Another example is Granot (see Table 1), a regional organization owned by 43 kibbutzim and moshavim. This cooperative is involved in three domains of activity. The first one is concerned with maintaining and developing agriculture on Granot members' farms and marketing agricultural products of the cooperative members. The second is the sorting and exporting of various agricultural produce. The third major activity is the provision of water for home and farm consumption. In addition, Granot serves as a bank for all its members. They can deposit their money with Granot at a higher interest rate than that obtained through the banking system, and similarly obtain loans at lower interest rates than those charged by the banking system (Bader, 2015). Therefore, the Granot regional purchasing organization is another example of a successful cooperative operating without the creation of any reserve funds and functioning at cost.

These secondary cooperatives operate on a cost basis, belong entirely to their members, create no annual surplus, have no reserve funds and are perceived as very sound financially. This situation contradicts the view of scholars who are concerned with the long-term survival of cooperatives without reserve funds (Alessandrini, Barco, & Battilani, 2014; Corcoran & Wilson, 2010; Jones, 2007; Sarno, 2008; Tortia, 2007).

5. Conclusions

This article is focused on the issue of reserve funds within rural cooperatives. We began with a discussion of the perception of a cooperative and its relationship with its members, and sought to show that the existence of reserve funds in cooperatives do not necessarily benefit or provide an advantage to their members. This study demonstrates that the cooperatives presented here function on the "at cost principle", without creating any surplus and without reserve funds, and therefore serves as a model for the success of an alternative approach. The article also presents a type of secondary rural cooperative, the regional purchasing organizations, which belong entirely to their members individually and also function successfully at cost without the creation of reserve funds.

This article presents forms of cooperatives operating in Israel, which do not exist on a large scale elsewhere. These models are worthy of being developed, disseminated and applied in other locations around the globe. The findings demonstrate the potential for successful operation of cooperatives which operate without reserve funds, and aim to function with transparency while offering members the best possible service at the lowest possible cost. It shows that the existence of a reserve fund may in fact operate against the interest of members and against the appropriate management of the organization. Appropriate management means that a cooperative is managed to provide its members the highest possible return for their participation at the lowest possible participation cost.

This article supports the idea that not all cooperatives need a reserve fund to maintain their existence successfully over time. An identified problem faced by cooperatives operating with a reserve fund is that if they are demutualized, or in the event of a liquidation of the cooperative, according to the international cooperative procedure as well as according to many national laws, the reserve fund is not divided among the cooperative's members because it does not belong to them. According to their procedures, cooperatives operate on an annual funding system where members are charged through their financial participation. Annual surplus, which is the source of the reserve fund is created when the participation costs charged to members are higher than what is required for operations. The examples discussed in the article, based on Israeli experience, suggest that successful rural cooperatives have been developed without the existence of reserve funds and without creating a financial surplus.

It can be argued that the existence of a reserve fund may affect the quality of services provided by a cooperative to its members, measured by their participation costs for the services it provides. High cost of participation is perceived as a decrease in quality of service to members. Low participation costs, equal to total operating costs, mean that the cooperative functions efficiently and provides a better service to its members. The cooperatives in the case studies in this article are fully owned by their individual members, operate successfully at cost without the creation of reserve funds and are already in their third decade of existence.

It is clear that this study has some limitations. The presented case studies support the idea of successful cooperatives without reserve funds, but the examples are rather limited. Further studies should be conducted on the subject to examine the necessity of the reserve fund to cooperative operation. Future studies of this issue may shed more light on the provision of an effective economic environment for farmers and other rural producers.

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