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## Minimizing brain drain: how *BumDes* holds the best resources in the villages

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## Minimizing brain drain: how *BumDes* holds the best resources in the villages

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**Abstract.** This paper examines the extent the *BumDes* Village-Owned Enterprises (hereafter *BumDes*) may minimize the local Brain drain in the village. Brain drain is a severe problem in Indonesia as they affected directly to the development of the village. Brain drain leads to the absence of human resources in the village, causing the best people to leave the village. Using qualitative methods and in-depth interviews in three villages in East Java, in Malang District, Banyuwangi District, Gresik District, this work found that the *BumDes* counter the brain drain to some extent. This paper demonstrates that there are three patterns of how brain drain can be minimized through the *BumDes*. Those are women's empowerment in *BumDes* business units, empowering village youth to manage the digitalization of the *BumDes* business unit, and recruitment of local fresh graduated from college to run the *BumDes*. In short, the *BumDes* could keep the best human resources to develop the villages.

### 1. Introduction

The brain drain phenomenon in the village can be traced to the tendency of productive resources and the best ones to leave the village to look for better opportunities elsewhere. The indication of the brain drain phenomenon is: first, high urbanization rates in the villages. Villages are synonymous with poverty, low living standards, and a lack of jobs, which are the triggers of urbanization. In 2025, the urbanization rate was estimated to reach 57.39% of the total population of Indonesia [1] [2]. Second, the existence of migrant workers in supporting the village. Phenomena in several villages illustrate the departure of citizens to work abroad. Stories about the failure of migrant workers, such as human trafficking, are balanced with their success working abroad. The families of migrant workers in the village are those who feel the effects of remittances [3]. This condition further confirms the truth of the picture that the village does not have the resources to empower its citizens. The families of migrant workers who represent villagers are very dependent on the income of someone who works outside their village. Thus, *BumDes* (village-owned enterprises) may keep the pace of brain drain in the village.

*BumDes* aims to improve welfare and empower people who live in the village. The *BumDes* implementation involves all villages in Indonesia in stages, so the system has a massive scale of accumulation. Since 2014 until 2018, the number of *BumDes* has reached 45,549 units. This achievement is equivalent to 61% of villages in Indonesia[4].

This paper discusses *BumDes* in minimizing the brain drain at the village level. *BumDes* is an effort to improve the welfare of the people in the village by providing opportunities for people to work and have a decent life by running village-owned enterprises. These efforts have an indirect effect on holding the best people not to leave the village but building their land. This paper suggests that brain drain reduction at the village level may occur if *BumDes* were able to absorb employment. As a business entity at the village level, *BumDes* may use skilled personnel to carry out managerial processes. The success of the *BumDes* managerial process should also create an effect on the



economic sector in the village that is more passionate and independent so that the best human resources will survive in the village. However, the *BumDes*' performance in using or maintaining the best resources is not as that easy. Villages, to some points, are not the best place to have a career and get rich, so the best resources prefer to go and expect gold rain elsewhere.

The second argument is that *BumDes* is an effort to make the village a decent place of prosperity for the citizens. *BumDes* is one of the priorities for the use of village funds [5]. The fact that emerged from the *BumDes* phenomenon was the implementation of the massive policy formation of this institution in various parts of Indonesia. This study saw the pattern of the *BumDes* in restraining and empowering the best human resources so that they did not leave the village.

Measuring *BumDes* capacity in decreasing brain drain rate, this study uses the criteria of the success *BumDes* by measuring the ability of *BumDes* to operate business units within the institution and the continued involvement of the best human resources in the village. This study took three research locations in East Java, Indonesia, namely: Malang Regency, Banyuwangi Regency, and Gresik Regency. The three research sites of *BumDes* were acknowledged as fairly decent in *BumDes* governance so that they attracted more attention both by many social observers and the newspapers in the region [6] [7] [8].

This research departed from the assumption that looking at the management of *BumDes* in these three locations can provide a pattern of the best performance of the *BumDes* in holding back the rate of brain drain from the village. The models are as follows. First, empowering women in *BumDes* business units. Second, recruiting well-educated youth. Third, empowering village youth in digitizing *BumDes* governance.

The study consists of several parts. After the research background, this paper underlines the research methods and reasons for choosing the research locations. In the results and discussion section, this paper shows how the *BumDes* attempt to restrain the brain drain rate. This section also discusses the logics of the involvement of youth in the *BumDes* a tactical effort stifled brain drain rate. The final section of the conclusion that provides the argument that *BumDes* with good governance at the local village scale can withstand the brain drain rate.

## 2. Methods

This research is qualitative research with descriptive research type. This is the procedure to produce descriptive data in the form of written or oral words from people we have interviewed. This approach is directed at the background and the individual holistically (intact). This research, thus, does not isolate individuals or organizations into variables but look at them as part of a whole of what has been studied [9].

The use of qualitative paradigms with the type of descriptive research is needed to reveal facts that exist as they are. Data collection was conducted by in-depth interviews with informants in three districts in East Java. The main informant interviewed was the chairman of *BumDes*. Additional resource persons the *BumDes* were selected purposively. Secondary data are obtained from field observations during fieldwork and also from journals, newspapers and working papers.

## 3. Results and Discussion

Brain drain is a reality about the departure of the best people from the area of origin to a new space which likely provides a better life. This study focuses on a somewhat micro level at the villages by looking at how institutions in the village, *BumDes* as village-owned enterprise's efforts to restrain the brain drain is a new approach. Mainly to reduce brain drain are using the macro-level approach such as national policy regarding economy and politics. The study shows that there is, at least three models of how *BumDes* may help the best people not leave the village but focus on the development of their local place. Through the *BumDes* the best people in the village have the opportunity to develop their land as the "best place" for them. The following are the "models" we found in the research.

### 3.1. Involvement of women in *BumDes* business units

The first model is the *BumDes* where women have a vital position in management. In this *BumDes*, many activities provide women opportunities to express their best versions of the women to get jobs and income. Thus, accordingly seeking a job outside the village are not an interesting option anymore. In this model, it is found that the enterprise included the best resources of women as part of

the human resources of the *BumDes*. In the *BumDes* namely *Melirang Hebat*, also known as eMHa (hereafter eMHa), women are an essential component in operating business units. The establishment of *BumDes* eMHa, in Melirang Village of Gresik Regency, East Java, Indonesia, is among an example how the *BumDes* has enabled women participation have been vital in the initiating and managing the *BumDes*. Women's involvement can be seen from the posture of the *BumDes* structure. Women serve as chair and treasurer to the *BumDes*. Moreover, the forming of *BumDes* was initiated by women. Women have been also the primary resources to fill the *BumDes* business unit post.

With those important roles taken by women, it shows that women's role is essential especially in the *BumDes* to provide trust. In managing the *BumDes* trust is an element to influence the day to day dynamics. As the *BumDes* combine business orientation and community empowerment, those mission is sometimes not understood by the community. The members of the community mostly see the *BumDes* on the empowerment side rather than the business side. Thus, many members see the fund from the *BumDes* is an instrument to provide grants rather than a tool to elevate entrepreneurship. This situation is the factor that caused the previous *BumDes* in the Melirang village failed to run. The previous management of *BumDes* was unsuccessful in managing the balance of the two missions. Therefore, the previous unit called the Financial and Business Management Unit (*Unit Pengelola Keuangan dan Usaha*, UPKu) that previously existed in the village failed to survive. The UPKu was a legacy of the previous government program, under president Susilo Bambang Yudhoyono. According to the accounting report in 2014, the capital loss was about 90% of the total. Only 10%, which is worth IDR 8.5 million out of a total of 85 million, was saved.

Following the failure of managing the UPKu, the biggest challenge for the *BumDes* is how to convince the community that the *BumDes* will not experience the failure as previously did. The women's involvement in the middle way to revive the unit. The rationale of women's involvement in the *BumDes* is both to run the activities of *BumDes* and to create employment and economic opportunities at the village level. As a result, all activities and the recruitment of staff in the *BumDes* were carried out by women in the village[10]. Women's involvement was apparent in the *BumDes* structure in several regions. Although there are more men in the *BumDes* structure, there are some key positions held by women. For example, the position of treasurer and secretary of *BumDes* Sember Sejahtera in PujonKidul Village, Pujon District, Malang Regency, and Ijen Lestari *BumDes*, Tamansari Village, Licin District, Banyuwangi Regency, East Java, Indonesia. Women occupy these two crucial positions.

Some of the reasons underline women as strategic players of *BumDes* are as follows. First, women's networks are more open. In the village, women have specific and permanent forums to discuss the issue related to the *BumDes*. This forum has also solved many community-related problems in the village. This forum is also transparent in activities, financial, technical. This forum is important in building and maintaining women's network. Second, so far, the village business units are closer to women. Most potential sources of the village to empower the community attached to women's daily lives. For example, the processing of dairy products in Pujon Kidul Village and Tamansari Village operated by women farmer groups. Although dairy products have not turned to be the central core commodity of *BumDes* in the village, these dairy products are abundant in empowering society. Other business units are the processing of spinach-based and honey-based products. Those two business units are operated mostly by women. Other businesses that are initiated by women are homestay, nature tourism, car rental, and cafes. They grow together under the supervision of women.[11][12].

Among the core business in several *BumDes* related to women are saving and loan institutions. These institutions are collaborations of women to empowering rural communities. The business units of savings and loan in Melirang Village, for example, is the work of women to help micro-trade in the village. This savings and loan institution has supported the economic sector in the villages so that the villagers do not need to seek works outside the village. *BumDes* in Melirang Village ran the business unit according to the uniqueness of the real potential of the village. Thus, the resident could be involved in business activities. Thus, the empowerment is extensive, especially involving women. The research found that the savings and loan business unit in Melirang Village involved 462 customers; most of them are women [13]. Around 95% of loans have been successful in accelerating the business sectors in the village. Their business consists of catering, bread production, and clothing accessories.

The success of empowering women as strategic partners in the *BumDes* business unit has the effect of decreasing the migration of women to the town or the other areas to seek jobs. *BumDes* has empowered women in the real economy and has placed women as core players in the *BumDes*. That situation has decreased the brain drain rate of the women in the village. Since women manage almost all of these micro-businesses, the *BumDes* in the village run in the balance both on the business side and the empowerment one in the village.

### 3.2. Recruitment of Well-Educated Youth

Forming *BumDes* and managing *BumDes* are two different things. Although the *BumDes* had economic logic, the formation of *BumDes* is often more (local) political. The village head usually appoints someone to be the chairman of the *BumDes*. The closeness with the village head is often the decisive factor in the recruitment of the *BumDes* chairman.

On the other hand, management capability is a crucial part of *BumDes* managers. Managing *BumDes* requires skilled in various elements related to *BumDes* administration and supervision. Because the recruitment process is often more political, managers who have managerial skills in running *BumDes* are rare at the village level. As *BumDes* must have minimum accomplishments, both organizationally and financially, some *BumDes* are failed to reach the goals, especially in the first phase of *BumDes* establishment.

There are two phases in the first period of the establishment of the *BumDes*, namely, the phase of transition and the phase of recruitment. The transition phase is the condition at the time of establishment until the establishment of *BumDes* business units. In the transition phase, political logics are often prominent. Accordingly, in this phase, only a few *BumDes* can perform well.

Further, *BumDes* that have successfully passed the transition phase enter the second phase of the recruitment. In this part, *BumDes* has no other option but recruiting competent human resources to run business units in *BumDes*. The recruitment phase is a condition when *BumDes* business units emerge and require unit development as a form of business expansion. This phase contributes significantly to minimize the rate of brain drain.

In the transition part, most *BumDes* were established in 2015. Within three years until four years, the *BumDes* have gone through a transition period. Initially, *BumDes* recruited voluntarily. Villagers who are willing to become managers of *BumDes* should do it voluntarily. Villagers are more interested in the idea of community involvement and empowerment as an essential entity in developing the village economy. Voluntary factors cause the managers involved in *BumDes* governance not to get the basic salary. Managers only get fees for daily needs in the form of allowances.

In the context of Brain drain, the *BumDes* can retain the brain drain rate even though it is still sporadic. At least *BumDes* can withstand the departure of community members who are concerned about village development. Although not entirely, the village's best resources participated in the formation process and developed *BumDes* to expand empowerment efforts in the village. For example, the core board of a *BumDes*, namely eMHa (stand for Melirang Hebat), shows that the chair, the secretary, and the treasurer are graduates who had pursued careers in urban areas. Before managing the eMHa, the managers had worked in National Bank, namely, Indonesian National Bank or Bank BNI (National Bank) of Gresik Branch. The secretary and the treasurer are tutors in education course institutions and administrative staff in one of the educational institutions in the rural areas. The reasons such as historical ties and community empowerment mission through *BumDes* have attracted these three gentlemen to return to the village. These three people embody the village as a reliable and independent economic entity through *BumDes*.

Meanwhile, *BumDes* Ijen Lestari and *BumDes* Sumber Sejahtera provide examples of diverse patterns in minimizing brain drain. Unlike the pattern in many *BumDes*, EmHa can maintain the best resources not to leave the village by recruiting those who are well educated and highly skilled. The two *BumDes* initiators and managers saw the opportunity to create new jobs in the village. Because new jobs are available, village HumanResourcechoosetowork in their villages rather than having to work in other areas. In the two *BumDes* mentioned, the best village human resources, from the extent of education level, were offered to work in the village to develop the *BumDes*. The achievement of these two *BumDes* has been able to decrease the brain drain rate.

The following is the absorption of *BumDes* towards educated human resources.

**Table 1.** Uptaking Educated Local Human Resources Through *BumDes*

<i>BumDes</i>	Core Boards	Head Business Units	Unit Members	Strategic Partners
eMHa	3	4	0	PKK, a new group of entrepreneurs, organic fertilizer makers.
Sumber Sejahtera	3	8	148	PKK, women farmer groups, tourism groups, home industry groups
Ijen Lestari	3	7	143	tour group, PKK, home industry group

Resources: Interviews with managers of *BumDes* eMHa, *BumDes* Sumber Sejahtera and *BumDes* Ijen Lestari

The aforementioned data demonstrate the absorption of *BumDes* towards educated human resources in the village. Healthy and growing *BumDes* is a pull for educated villagers to work in *BumDes*. The more varied the business units formed by *BumDes* according to the genuine potential of the village, the more human resource is needed to manage the *BumDes*. The developed *BumDes*, to some extent, can withstand the rate of brain drain due to the absorption of work potential from the village community. The research shows that educated human resources had deliberately returned to the village because of the success of *BumDes*. For example, a member of the business unit called Live In, a homestay, in the *BumDes* Sumber Sejahtera, previously was the person who had worked in the capital city, Jakarta. This person then chose to go back to the village and work for *BumDes* in the homestay business unit. The person a great opportunity to run the Homestay business units managed through *BumDes* had attracted him to return to, and work for, the village.

Another aspect of nurturing educated resources interested in working in the village is to implement the provision of non-salary incentives to the *BumDes* Business Unit. In these two villages, the *BumDes* provide a progressive salary to their unit. The standard salary based on regional minimum wage standards or the UMR (*Upah Minimum Regional*). The *BumDes* also provide incentives to business units to generate high profits. For example, a local guide business unit at *BumDes* Ijen Lestari and a *BumDes* Sumber Sejahtera that runs the Integrated Waste Management Site (TPST) business unit, they provide the progressive payment system, so that is more attractive for local people to work in the village. Thus, those are evidence that the *BumDes* can control brain drain. Even *BumDes* cause working in the village an attractive choice for the best village human resources compared to working outside the village.

### 3.3. Involving Youth in Digitalizing Business units in the *BumDes*

In these three villages, *BumDes* used digitalization as a supporting instrument for managing its business units. Digitalization has become a link between the village and the public in other places. Promotion and communication with outside parties are easy because *BumDes* is able to make good use of digital technology. As proof, *BumDes* Melirang Hebat (eMHa), Ijen Lestari, Sumber Sejahtera showed digitalization in their efforts massively.

The digitalizing program of *BumDes* involves the youth. The *BumDes* manager considers that young people are more familiar with trends in the digital world. Digitalization in the *BumDes* business units is a strategy from *BumDes* to attract youth involved in the governance of the institution. The effect that arose later was to grow a sense of ownership of *BumDes* for young people in the village. Digitalizing the *BumDes* business unit is in line with the *BumDes*' ideals in holding back the brain drain out of the village.

The young people of Tamansari Village, Licin Subdistrict, Banyuwangi Regency, East Java, collaborated with *BumDes* Ijen Lestari to develop talent in the world of information and earn income. One of their activities is to promote *BumDes*' main business in the form of tour packages. Promotion is done through applications such as Pegi-Pegi, Traveloka, and accounts on social media such as on Youtube, Instagram, Facebook, and Twitter. These young people who connect the community with the homestay lodging services that use the houses of the villagers. Aside from being a liaison, young

people become local guides, driving *BumDes* transportation business units with tour packages to Gunung Ijen.

*BumDes* Sumber Sejahtera also empowers young people in digitizing *BumDes* business units. *BumDes* Sumber Sejahtera uses digital social media to promote tourist destinations and products produced by local residents. The *BumDes* Sumber Sejahtera manager manages digitalization by including potential young people in the organizational structure of the institution.

While the use of digitalization of the Hebat *BumDes* (eMHa) focuses on agricultural business units, precisely bat organic manure and savings and loan business units. Through an account on the Youtube application, the agricultural business unit is very well known in other regions. The impact is sales circulation with achievements in almost all of Indonesia. Also, well-organized digitalization is applied to the financial system of the savings and loan business unit. The involvement of young people in digitizing the savings and loan business unit was able to help about 200 new forms of entrepreneurship within one year. For *BumDes* Melirang Hebat (eMHa), digitalization has increased net profits by 50% from 2017 to 2018 in the savings and loan unit.

Digitalization involving young people has made *BumDes* able to improve business unit optimization and increase profits. In fact, digitizing *BumDes* is proof that the village has several invention steps in the field of digital technology-based innovation. The massive digitalization also makes the best human resources actively explore village potential. With digitalization, there will be more jobs that are created. Before digitalization, the village was unknown to the people. Nevertheless, when digitalization shapes the village to be known better by the people outside the village for its tourism potential. Through the digitalization of *BumDes* makes youth involvement to build their villages increased, so the youth would rather stay than move to urban areas. In short, to some extent, the *BumDes* have handled Brain drain in the villages. Digitalized *BumDes* does not fully stop the migration of the youth from the rural to the urban areas. However, on average, 6 out of 10 fresh graduates are more likely to run the digitalized *BumDes* shows that the digitalization of *BumDes* matters.

#### 4. Conclusions

The success of *BumDes* in building the core business can be seen from how their business units operate. The business of *BumDes* is not like the business in general. The business of *BumDes* is originated from the village potential which is realized through its business units. This research shows that the success of *BumDes* is more due to the ability of members to explore the village's potential so that *BumDes* runs and grows healthy. Thus, the economic turnover in the village occurs.

*BumDes* requires the best human resources to manage, develop, and maintain its sustainability. In the context of the decreasing of brain drain, the healthy, open, and modern *BumDes* have drawn the best village resources to participate in managing the business. The best human resources prefer to survive in the village because there are jobs and unlimited economic opportunities. Villagers in urban areas even go back to the home where they belong and build businesses through *BumDes*. In short, *BumDes* could be a factor that reduces the phenomenon of brain drain.

Nonetheless, the success of decreasing the brain drain rate through *BumDes* may not reflect all *BumDes* in Indonesia. The study of the three *BumDes* provides lessons learned in overcoming brain drain at the micro-level. The success of *BumDes* in running a business unit based on village potential and empowering rural communities may attract the best village human resources to develop the village. Thus, this paper shows that the discussion on brain drain should provide a space for the micro or village-based organization such as *BumDes* as an important actor to decrease the number of brain drain.

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