

Effect of Organizational Resources on Improving Independency of People with Severe Disabilities: Vocational Rehabilitation Facilities in South Korea

Soungwan Kim

Abstract—This paper discusses an analysis of how the characteristics of resources at vocational rehabilitation facilities for the disabled affect the improvement of independency skills among people with severe disabilities. The analysis results indicate that more internal financial resources and more connections to local communities among network resources had greater effects on improving the independency of people with severe disabilities. Based on this result, this paper presents strategies for mobilizing resources to improve the independency of people with severe disabilities at vocational rehabilitation facilities.

Keywords—Vocational rehabilitation facility for people with disabilities, types of resources, independency, network resources.

I. INTRODUCTION

IN order to secure the resources that an organization needs, it is inevitable that it interact with the surrounding environment. An organization is run by a collaboration between its internal and external components. The environment involves the resources that are rare but valuable and vital for the survival of the organization [1], [2]. Therefore, organizations obtain resources through collaborating with the external environment when they lack internal resources [3]. In other words, organizations can gain needed resources and increase their inventories of pre-existing resources through their relationships with other organizations [4]. In particular, non-profit organizations, such as vocational rehabilitation facilities for people with disabilities, have difficulty achieving their goals through their internal resources alone.

Organizations sometimes manipulate the environment in order to receive resources beneficial to them by interacting with the external environment (other organizations), by which they eliminate the uncertainty that threatens their survival [5]; sometimes they take advantage of the relationships among other organizations, using tactics such as strategic partnerships, to improve the capability of their organizations. As such, the management of resources and interdependent circumstances is a crucial element that determines the success of modern organizations.

Although organizational resources and environmental characteristics are concepts that have received attention for a long period of time, there are not many cases wherein a

systematic and empirical analysis of these concepts was conducted at the level of non-governmental organizations.

Vocational rehabilitation facilities have a significant organizational feature in that they provide severely disabled people with job opportunities as well as the opportunity to integrate with society through employment. In particular, the ultimate goal of vocational rehabilitation is to assist individuals with disabilities in finding jobs that suit their skills and aptitudes, feeling satisfied with their jobs, and taking part in society as citizens. In other words, vocational rehabilitation facilities for people with disabilities can be regarded as social welfare service organizations that can help improve the independency of people with severe disabilities.

To this end, the present study utilized the resource-based view suggested by [2] to analyze empirically the type of resources at Korean vocational rehabilitation facilities for people with disabilities and searched for ways to mobilize said resources to improve the independency of people with severe disabilities.

II. THEORETICAL DISCUSSION

A. Resource-Based View

The resource-based view was developed in the process of pursuing a breakaway from neoclassical economics and industrial organization theory [6]. At the early stage of developing the theory, Wernerfelt and Rumelt asserted the significance of resources by arguing that the distinguishing features of a firm, instead of the characteristics of the market or industry, determine said firm's success [7], [8]. Barney categorized the resources of a firm into physical assets, human assets, and organizational assets. According to Barney, a firm's resources include all of its assets, capabilities, organizational processes, information, knowledge, and characteristics, all of which allow the firm to establish and implement strategies [9].

The types of resources can be largely classified into an organization's internal factors, the capacity of its human capital, and its resourceful education [10], [11]. First, early discussions of the resource-based view mainly focused on an organization's internal resources. They believed that the origin of a firm's competitive advantage resides in its internal resources and therefore focused on the development of resources and the strategic intention of the executives. Second, an organization's resources and capabilities have a close connection to its members. According to them, human capital can change the performance of an organization because it can implement,

S. Kim is with the Division of Policy Development and Research, Korea Disabled People's Development Institute, Seoul, 150-917, Republic of Korea (phone: 82-2-3433-0652; fax: 82-2-416-9567; e-mail: quse77@yonsei.ac.kr).

exchange, and improve information. Third, according to the resource-based view, firms can organize their resources through education.

With regard to relationships among organizations, the resource-based view focuses on the “exchange of resources.” According to the Resource-based View, organizations rely on other organizations in order to obtain their needed resources [2], [12]–[14]. Pfeffer and Salancik reported that in order to minimize the limitation of resources and maximize the use of their available resources, firms depend on external organizations that possess the needed resources; the level of dependency is influenced by the substitutability and the scarcity-based value of the resources [2]. In other words, vocational rehabilitation facilities can be affected by external resources in terms of the formation of relationships among organizations and their organizational activities.

B. Vocational Rehabilitation Facilities for People with Disabilities

The Disability Act, Article 58, Section 1, Clause 3, states that vocational rehabilitation facilities for people with disabilities are facilities that assist persons with disabilities who have difficulty working in a regular work environment to receive training or employment that has a specially modified work environment. The Disability Welfare Guide from the Ministry of Health and Welfare states that the purpose of vocational rehabilitation facilities for people with disabilities is as follows: to provide job opportunities and various services related to the vocational rehabilitation of persons with disabilities so that they can lead humane lives through employment that fits their skills and aptitudes and, in doing so, improves their independency.

In South Korea, the first vocational rehabilitation facility was developed in 1979 by the Samyuk Center for Children with Disabilities (currently the Samyuk Rehabilitation Center) in the form of a fish market with a modified work environment. Later, in 1981, the Disability Act for the Physically and Mentally Disabled was established. Based on the act, 22 modified work facilities were built in 1986. In 1999, the Disability Welfare Act was fully revised, and starting in January 2000, five facility types were established: work, sheltered workshop, workstation, job training, and product sales. Among the required items at governmental and public organizations, it was stipulated that those items and quantities selected by the Minister of Health and Welfare were to be purchased with higher priority [15]. In 2008, due to the obscurity of the type and role of each facility, the facilities were categorized as either sheltered work facilities or workstations.

According to the Disability Welfare Act, Article 41, sheltered work facilities provide disabled people who have a low work capability with job training programs, such as work adjustment skills and work skill improvement programs, as well as with job opportunities in an environment that protects them, pays appropriate wages for their labor, and helps them advance to workstations or other competitive labor markets. Workstation facilities, on the other hand, offer jobs to persons who have job skills but have difficulty finding employment due

to limited mobility, poor accessibility, or social limitations; they pay higher than minimum wages and help them advance to the competitive employment market.

C. Previous Studies on Independency and Resource Types

Independency, or the independent life of a person with a severe disability, indicates that not everything should be done for disabled individuals; any practical help should be determined based on the person’s desire and choices.

Kestendbaum argued that independent life requires assistance with housing, daily activities, transportation, protection of rights, information, counseling, and supply of assistance devices [16]. Morris stressed the significance of strengthening the capabilities to live independently for people with disabilities to take control of their own lives [17]. These are elements for independency at the individual level. From the organizational level of vocational rehabilitation facilities for people with disabilities, offering employment opportunities to people with severe disabilities can increase social participation and opportunity to become integrated in society through satisfying employment.

There have not been enough studies conducted on the types of resources available at vocational rehabilitation facilities; however, Kang analyzed resource mobility and influencing factors at vocational rehabilitation facilities. According to Kang, vocational rehabilitation facilities should not only provide assistance to disabled people, but should also ensure that they have productive jobs that can guarantee their income [3].

Vocational rehabilitation facilities for people with disabilities utilize internal resources, external resources, and network resources in carrying out various projects such as sheltered employment, career counseling, job aptitude tests, work adjustment training, job training, job offers, counseling after employment, expanding the sales and distribution of products made by the disabled, etc. First, internal resources are acquired by securing profitable resources through the sales of products made by severely disabled persons. Second, external resources include financial resources from the central and local governments as funds from other organizations. Third, network resources are obtained via networks with other organizations or with local communities. In other words, network resources can maximize the securing of resources (resources that cannot be fully met internally or externally) through networks with other organizations and local communities.

There is an empirical study finding that sharing experience and relevant information through systematic and collaborative relationships among organizations, which is the definition of networking, is advantageous to distributing and securing resources among organizations [18]–[23]; there are discussions on the Disability Welfare Center’s vocational rehabilitation network [24], [25]. However, there are not enough studies done on the types of resources at disability vocational rehabilitation facilities.

III. METHODOLOGY

A. Subjects

The present study analyzed the raw data from a survey of vocational rehabilitation facilities and operation improvement study (2014). The survey content consists of 50 questions on the status of operation, finance, employees, products, networking with other organizations and local communities, current participation of disabled people, and vocational rehabilitation programs. The survey was conducted via mail using structured questionnaires. The survey period was approximately five weeks, from May 22, 2014 to June 30, 2014 [26].

The participants of the survey were 377 vocational rehabilitation facilities for people with disabilities. In particular, the present study analyzed 334 sheltered work facilities capable of maximizing the independency of severely disabled persons.

B. Dependent Variable

The dependent variable of this study is whether or not the severely disabled people experienced improved independency; the responses to "Employment improved the independency of the person with disability," were coded into two categories; "Strongly disagree," "Slightly disagree," and "Neither agree nor disagree" were coded as "0;" "Agree" and "Strongly agree" were coded as "1."

C. Independent Variables

The independent variables of this study are the internal, external, and network resources. First, for internal resources, the financial resources (business profits) of the sheltered workstation at each vocational rehabilitation facility were transformed into a log value. Second, human resources were coded as the number of disabled people being trained. Third, information resources were coded as the sum of the number of certified career trainers and the number of job trainers. With regard to external resources, the ratios of funding from the central government, from the local government, and from other firms and organizations were coded into log values. With regard to network resources, first, the networking with other organizations was measured via seven statements using a five-point Likert scale: "We regularly attend meetings with other organizations," "We exchange information with other organizations," "We share our visions and the goals of our projects," "In order to manage our program, we use uniform documents and programs," "When necessary, we commission other organizations," "When necessary, we modify service plans for one another," and "We exchange human resources." The reliability of the questions was high (Cronbach's Alpha = 0.748). Second, the networking with local communities was measured via four questions using a five-point Likert scale: "The perception of disabled people in the community has become more positive," "We maintain systematic collaboration with local communities by utilizing local community resources," "We have increased participation of the local community in the vocational rehabilitation facilities," and "We have increased participation of disabled people in local communities." The

reliability of this question was high (Cronbach's Alpha = 0.826).

D. Method of Analysis

In order to analyze the type of resources that affect the improved independency of severely disabled people, logit analysis was performed. Logit model is an appropriate method of analysis when the dependent variable is a binomial variable.

$$y_{it} = \begin{cases} 1, & y_{it}^* > 0 \\ 0, & y_{it}^* \leq 0 \end{cases}$$

$$y_{it}^* = \alpha + \beta x_{it} + \mu_{it} + e_{it}$$

The error term, μ_{it} , indicates the heterogeneity that changes based on the item; however, within one item, it has a permanent feature that does not change over time, and e_{it} is a pure error term that changes based on item and time. Logit analysis assumes that the error term e_{it} follows the pattern of logistic distribution. In addition, logit analysis can be classified into two models depending on which effect the error term μ_{it} assumes: Fix Effect Model and Random Effect Model. The Random Effect Model assumes that μ_{it} follows the probability distribution; it can be applied under the assumption that survey data collected via probability sampling follows the probability distribution [27]. The present study conducted logit analysis based on the Random Effect Model and analyzed the data using SPSS 19.0.

IV. RESULTS

A. Descriptive Statistics

TABLE I
 DESCRIPTIVE STATISTICS

Variables	Category	Average	Standard Deviation
Internal resources	Financial resources		
	Amount of project fund (1,000 won)	328,276	613,397.4
	Human resources		
	Number of participating disabled persons (people)	17.5	11.3
	Number of organization staff (people)	6.3	4.1
	Information resources		
External resources	Number of vocational rehabilitation trainers (people)	2.6	1.0
	Number of vocational rehabilitation trainer certificates (number)	2.8	1.5
	Ratio of central government funding (%)	11.9	26.2
	Ratio of local government funding (%)	72.6	33.3
	Ratio of other organizations (%)	12.2	19.7
Network resources	Networking with other organizations (points)	2.6	1.2
	Networking with local communities (points)	3.4	0.6

The descriptive statistics of the target participants in this study are shown on Table I. Among the internal resources, the average financial resources at a sheltered workstation within a vocational rehabilitation facility for people with disabilities were 328,276,000 KRW with a standard deviation of 613,397.4. For human resources, the average number of participating disabled people was 17.5 with a standard deviation of 11.3. The average number of staff at the facility was 6.3 with a standard deviation of 4.1. Regarding information resources, the average

number of vocational rehabilitation trainers was 2.6 with a standard error of 1.0. The average number of vocational rehabilitation certificates was 2.8 with a standard error of 1.5.

Among external resources, the average ratio of the central government funding is 11.9% with a standard error of 26.2. The average ratio of the local government was 72.6% with a standard error of 33.3%. The average ratio of the funding from other organizations was 12.2% with a standard error of 19.7.

Among network resources, the average score for networking with other organizations is 2.6 points with a standard error of 1.2, and the average score for networking with local communities was 3.4 points with a standard error of 0.6.

B. Results of Analyzing the Independency Improvement Factor by Resource Type

Logit analysis was performed in order to analyze the factors that improve independency of persons with severe disabilities based on the type of resources at sheltered workstations within vocational rehabilitation facilities. The result of analysis indicates that financial resources among internal resources and networking with local communities among network resources were identified as effective variables. To be specific, project profits have a significantly positive effect (10%), while networking with local communities was identified as having a 1% positive (+) effect.

TABLE II
 RESULT OF ANALYZING THE INDEPENDENCY IMPROVEMENT FACTOR BY RESOURCE TYPE

Variables	Category	B	S.E.	Wals	Exp (B)
Internal resources	Constant	-3.369	1.179	8.166	0.034
	Financial resources				
	Business profits	0.131	0.074	3.141*	1.140
	Human resources				
	Number of disabled staff	0.015	0.017	0.795	1.015
	Number of staff	-0.012	0.068	0.030	0.988
	Information resources				
External Resources	Number of vocational rehabilitation trainers	0.072	0.271	0.072	1.075
	Number of certified trainers	0.004	0.178	0.000	1.004
	Ratio of the central government funding	-0.093	0.123	0.574	0.911
	Ratio of local government funding	-0.194	0.149	1.682	0.824
	Ratio of funding from other organizations	0.103	0.123	0.703	1.108
	Network resources	Networking: other organizations	0.056	0.136	0.172
	Networking: local communities	0.995	0.285	12.148***	2.705

N=334
 $X^2=13.714^*$
 Nagelkerke $R^2=0.129$

* $\rho < 0.1$, ** $\rho < 0.05$, *** $\rho < 0.01$.

First, among internal resources, financial resources were identified as having a statistically significant effect. In other words, the higher the amount of profits a sheltered work facility has, the more likely that the independency of the associated severely disabled persons increases. Internal resources at

non-profit organizations, such as vocational rehabilitation facilities, can play a crucial role in achieving the goals of the organization. As a matter of fact, there are many studies that discuss the negative effect of the central government's funding on non-profit organizations' achieving their goals [28], [29]. Although external resources were not identified as statistically significant in the present study, reliance on funding from the central and local governments has the potential to decrease the independency of people with severe disabilities. Berger and Neuhaus reported that the government's financial support for non-profit organizations involves potential risks, such as bureaucratization of the organization or expense increases [30]. In other words, government-dependent resources can potentially cause inefficiency in achieving the organizational goals due to the associated activities that meet the government's goals rather than improving the independency of people with severe disabilities, which is the goal of vocational rehabilitation facilities for people with disabilities.

Second, among network resources, networking with local communities was identified as having a statistically significant effect. In other words, the more networking with the local communities there is, the more likely it is that the independency of people with severe disabilities increases. This is in the same context as the theory of normalization, which argues that people with disabilities should be integrated into the community. Normalization theory emphasizes the freedom of choice during one's life cycle, living a normal life at home with typical people, and living an integrated life in the community. Therefore, the more networks the vocational rehabilitation facilities have with their communities, the higher chances the disabled workers have of finding regular employment and becoming more independent.

V. DISCUSSION AND CONCLUSION

The objective of this study is to analyze how the types of resources at vocational rehabilitation facility for people with disabilities affect improving the independency of people with severe disabilities. The result of the analysis showed that the greater number of internal resources, such as financial resources, at vocational rehabilitation facilities for people with disabilities, the greater likelihood that the independency of the concerned people with severe disabilities improves. In addition, the more networking with local communities there is, the more likely it is that the independency of people with severe disabilities improves.

Based on the research results, the following strategies can be utilized in order to mobilize resources in a manner that increases the independency of people with severe disabilities at vocational rehabilitation facilities.

First, in order to secure enough internal resources, it is necessary to vitalize a system of priority purchase for products made by people with disabilities. Currently, vocational rehabilitation facilities for people with disabilities are undergoing challenges in supplying and delivering products due to public perception of the products and lack of promotion [26]. Therefore, it is necessary for vocational rehabilitation facilities for people with disabilities to secure internal resources

by expanding the consumer base through progressive marketing.

Second, it is necessary to expand business consulting and program support for the promotion of creative projects by considering the unique characteristics of each vocational rehabilitation facility for people with disabilities so that internal resources can increase.

Third, it is necessary to collaborate continually with the local communities so that people with severe disabilities can transition to regular employment. Furthermore, it is necessary to establish the concept of employing persons with severe disabilities and present the need for them to transfer to mainstream employment in the operation guidelines of vocational rehabilitation facilities for people with disabilities.

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Soungwan Kim received his Ph.D. in Public Administration from Yonsei University in 2011 and is currently an assistant researcher at the Korea Disabled People's Development Institute. Kim's areas of academic interest include public administration, policy for disabled persons, and employment policies. Kim's recent research includes a work entitled "A Study of the Impact of Discrimination Experience on Life Satisfaction in Korea Women with Severe Disabilities (2015)."