

# The viability of self-employment for individuals with disabilities in the United States: A synthesis of the empirical-research literature

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**Abstract.** The lack of employment opportunities and stable employment for individuals with disabilities continues to pose personal and societal difficulties and challenges. Moreover, research and government statistics have consistently reported that individuals with disabilities have lower employment wages and benefits than individuals without disabilities, as well as limited opportunities for promotion and career advancement. Not surprisingly, individuals with disabilities also experience persistently higher poverty rates. While much is known in the empirical-research literature about individuals with disabilities who work for someone else, much less is known about individuals in self-employment. Some anecdotal information suggests that self-employment may be a way to improve these outcomes.

In the present paper, we reviewed, analyzed, and synthesized the findings of empirical-research studies on self-employment of individuals with disabilities in the United States. We found that successful self-employment is defined in financial and non-financial terms and is largely influenced by three factors: individual characteristics, level of supports, and accountability systems. Because of the small number of U.S. research studies on self-employment, however, our conclusions are tentative. Further empirical research is needed, focusing especially on long-term outcomes. Implications for researchers, individuals with disabilities, and other stakeholders are discussed in conclusion.

**Keywords:** Disabilities, self-employment, employment, vocational rehabilitation

## 1. Introduction

Despite a number of federal initiatives, significant improvements in adult employment outcomes have not occurred for individuals with disabilities. For example, comparing results from the National Longitudinal Transition Study-1 and the National Longitudinal Transition Study-2, which were conducted over the last

two decades respectively, Newman, Wagner, Cameto, Knokey, and Shaver [19] found that these two cohorts of individuals with disabilities, who had exited high school several years earlier, did not differ in employment status, hours worked per week, job duration, or average hourly wages [19]. More problematic, perhaps, is that in a recent national survey by the U.S. Department of Labor, only 19.1% of employers reported hiring individuals with disabilities, and only 13.6% reported actively recruiting individuals with disabilities, with the public sector more likely to actively recruit and hire individuals with disabilities than the private sector [10].

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The disparities in employment outcomes between individuals with disabilities and individuals without disabilities have been rather stark. The U.S. Census Bureau recently reported that 45.6% of individuals with disabilities 21 to 64 years of age were employed with median monthly earnings of \$1917; whereas 83.5% of individuals without disabilities in the same-age group were employed with median monthly earnings of \$2539. In addition, 27.1% of individuals with “severe” disabilities and 12.0% with “non-severe” disabilities 25 to 64 years of age were categorized as “living in poverty”; whereas 9.1% of individuals without disabilities in the same-age group were categorized as such [36]. Unfortunately, these disparities are not a recent phenomenon, and individuals with disabilities, from young to mature adulthood, remain at risk of social stigma, diminished self-esteem and self-determination, dependence on governmental assistance, and other related persistent challenges and difficulties [13].

A growing body of anecdotal information suggests self-employment can be a sustainable answer for improving employment outcomes of individuals with disabilities. According to the U.S. Department of Labor [39], individuals with disabilities are “. . . nearly twice as likely to be self-employed as the general population, 14.7 percent to 8 percent.” Over the last two decades, self-employment has become more prevalent among individuals with disabilities due in part to the (a) shift in the U.S. economy from industrial manufacturing to a high-technology, information and service-oriented economy, and (b) philosophy and movement of consumer choice and self-determination in employment for individuals with disabilities [9, 22, 26, 30, 31, 40]. Others have surmised that self-employment is appealing because it can be less stigmatizing than other employment as it connects the “American Dream” of owning a business “. . . with the commitment of rehabilitation professionals, family members, friends, and neighbors to assist people with disabilities in achieving typical lives” [11, p. 2].

The two recessions that book-ended the last decade mark a continuing evolution of the globalized U.S. economy. As traditional wage and salary employment is being redefined, emerging markets could expand opportunities for self-employment. Economic changes have also been inextricably linked to technological advances, which have not only spurred innovation such as digital-wireless communications and social-networking media, but also the growth of internet commerce, which may ameliorate self-employment barriers related to disability. For example, an analy-

sis of data on U.S. veterans with service-connected disabilities found that computer ownership was correlated with a higher rate of self-employment [21]. Such developments have broad implications for stakeholders, including individuals with disabilities, researchers, business community, schools, employment agencies, and non-government organizations. Therefore, in this article, we conducted a synthesis of empirical research studies to answer the question: “How viable is self-employment for individuals with disabilities in the United States?”

## 2. Methodology

The procedures for addressing and answering our central question comprised three steps: (a) defining disability, viability, and self-employment; (b) searching research databases for literature; (c) selecting and coding the studies to be synthesized.

### 2.1. Defining terms

In this paper, the definition of *disability* was adopted from a current legal definition used by the U.S. Department of Labor Office of Disability Employment Policy [38]: “. . . a person with a disability is generally defined as someone who (1) has a physical or mental impairment that substantially limits one or more ‘major life activities’, (2) has a record of such an impairment, or (3) is regarded as having such an impairment.” A dictionary definition of *viable* is, “Capable of success or continued effectiveness; practicable” [1, p. 1502]. In this paper, *viability* was similarly defined: capability of success or continued effectiveness in self-employment by individuals with disabilities. From the U.S. Census Bureau [35], we adopted the following two-part definition of *self-employed worker*:

- Self-employed in own not incorporated business workers. Self-employed in own not incorporated business workers includes people who worked for profit or fees in their own unincorporated business, professional practice, or trade or who operated a farm.
- Self-employed in own incorporated business workers. In tabulations, this category is included with private wage and salary workers because they are paid employees of their own companies.

The aforementioned definitions are applicable in this paper because they come from the same government

sources that were used and cited for statistics such as poverty rates and income.

## 2.2. Searching research databases

The search began in three large research databases: Academic Search Premiere, ERIC, and PsychInfo. These databases are the largest sources of published research in the social sciences. Using the terms *disabilities* and *self-employment*, we limited the search to English-language, peer-reviewed publications. Thus, we excluded encyclopedias, newspapers, magazines, theses and dissertations, and practitioner and trade papers. No date limit was placed on the search to ensure historical breadth. This first search yielded 29 listings in Academic Search Premiere, 21 in ERIC, and 5 in PsychInfo. Duplicate listings were discarded.

Because the topic of self-employment is interdisciplinary, we sought to ensure a comprehensive search. Therefore, we searched two additional databases, Business Source Premiere/Econ-Lit and Sociological Abstracts. Using the initial search terms and limitations, this search yielded 17 listings in Business Source Premiere/Econ-Lit and 12 listings in Sociological Abstracts. These listings were compared to the initial search and duplicates were eliminated. In some, the terms *entrepreneurship* and *microenterprise* were used synonymously for *self-employment*. Therefore, we conducted another search of the same five databases using the two new terms along with the original terms and limitations. Then, we conducted a search using names of authors that appeared across multiple listings for additional non-duplicate sources. Finally, as background information, we obtained employment and related prevalence data, such as income and wealth, from websites of the U.S. Department of Labor and the U.S. Census Bureau. Our entire search process is summarized and presented in Table 1.

## 2.3. Selecting and coding studies

Upon completing the literature search process, we selected and sorted the literature as U.S. empirical research studies and other literature. This approach ensured our focus for this paper was solely on U.S. empirical research studies, and not synthesizing U.S. and international empirical studies because of fundamental differences in (a) cultural factors, such as the promotion of the American “entrepreneurial spirit” and the virtues of owning a small business; (b) economic factors, such as the availability of capital and business

loans; and (c) legal factors, such as laws and regulations for Workforce Investment and vocational services that support self-employment. To derive an answer for the central question of the viability of self-employment for individuals with disabilities in the U.S., then, we sought to obtain the strongest research evidence, which comes from published peer-reviewed empirical research studies [16].

The process of coding the selected studies comprised the following steps. The first author completed multiple readings of each selected study’s research purpose and method, noting the (a) research questions or specific hypotheses to be tested; (b) unit of analysis and participants’ background; (c) research design, whether experimental or non-experimental; and (d) data collection and measurement, such as qualitative interviewing with narrative analysis, or quantitative survey with statistical analysis. Next, the first author completed multiple readings of the descriptions of research results/findings and limitations, noting (a) outcomes such as statistical significance and effect size of quantitative data, or emergent themes of qualitative narrative data; (b) discussion of results/findings; and (c) limitations, conclusions, and implications for research and practice. A summary of all the selected empirical-research studies is presented in Table 2.

The first author also completed multiple readings of the remaining literature, noting and organizing major points or themes. This set of other literature from the search process included international studies, U.S. and international non-research policy papers, opinion/position papers, and summary/review articles or documents on self-employment of individuals with disabilities. These articles, documents, and papers would serve a secondary role in our synthesis, providing relevant context and suggestions for further analysis. A summary of this literature is presented in Table 3. Throughout the coding process, the second and third authors evaluated the first author’s coding for accuracy. Full inter-observer agreement (i.e., 100% agreement) on the coding among all three authors was established before proceeding to the synthesis of the selected studies.

## 3. Findings

A small number of U.S. empirical-research studies ( $n = 12$ ) met our selection criteria. The relatively inchoate studies – since 1994 – were exploratory in focus and descriptive (i.e., neither predictive nor causal)

in their report of results, which included qualitative and quantitative outcomes. Every study used a non-experimental research design, with particular focus on the unit of analysis, the self-employment perspectives of either (a) individuals with disabilities, or (b) service professionals, such as vocational-rehabilitation (VR) counselors.

### 3.1. *Individuals' perspectives of self-employment*

Across the selected studies that examined self-employment from the perspectives of individuals with disabilities, predominant emergent themes included reasons for self-employment, benefits and challenges of self-employment, and support in self-employment.

#### 3.1.1. *Reasons for self-employment*

The reasons individuals with disabilities pursue self-employment are diverse and vary in complexity. For some, self-employment is a response to the discrimination they faced in losing employment or struggling to gain employment [7], or to the lack of opportunities in other types of employment [12]. For others, self-employment is partly an answer to previous, unsatisfactory employment [18] and a wish to take previous experiences working for others to explore working for themselves [18, 22].

Individuals with disabilities may choose self-employment based on a combination of reasons that not only includes elements of typical business-feasibility assessment, such as resource/support availability and understanding one's circumstances, abilities, and needs, but also includes nuanced or idiosyncratic elements of risk-taking, such as chance and timing of life events that seems to provide a window of opportunity for self-employment at a particular moment [22]. Still for other individuals with disabilities, self-employment may simply be a matter of choice. Funded by the Rehabilitation Services Administration, the United Cerebral Palsy Association's *Choice Access* demonstration project found 21% of participants had chosen self-employment. Although not based on empirical-research evaluation of the project, a common sentiment by participants was, "It's my choice, it's what I want to do" [8, p. 76].

#### 3.1.2. *Benefits and challenges of self-employment*

Individuals with disabilities can derive a range of benefits and challenges in self-employment. Financial benefits are paramount for some, and pursuing financial independence to support themselves and their depen-

dents is a top priority, even as they face the prospect of only making enough to supplement other income from government assistance or other employment that they already currently have [12, 18]. Others may have a more ambitious goal and plan not just to sustain or maintain but expand their business [7, 12]. Self-employment benefits can also be more intrinsic or intangible, such as having a decision-making role, sense of dignity, personal control, personal competence, work autonomy, self-worth, self-reliance, enjoyment of work, a way to meet personal expectations, and work toward changing societal attitudes about individuals with disabilities [12, 18].

A primary challenge in self-employment is the access to adequate capital and financing for funding a business, extending beyond individual and family resources. While this problem is certainly not unique to individuals with disabilities, their access to necessary business capital and financing from conventional sources, such as commercial banks, has been almost as difficult as it has been historically for women and ethnic-minority groups [22, 23]. Consequently, individuals with disabilities have relied upon and used a number of alternative sources of funding, such as community small-business development organizations, vocational rehabilitation and disability-services agencies, and grant programs [7, 12, 22].

Related to their unique status, individuals with disabilities face other critical challenges, including (a) perceived or actual reduction in government benefits due to the income generated from self-employment, (b) societal prejudice, (c) negative public attitudes and low expectations, (d) educational barriers in school transition and vocational programs, (e) technological barriers in the access and use of devices, and (f) funding and policy/regulation barriers in business and personal supports [8, 18, 23, 26].

Responding to self-employment challenges may require different skill-sets based on the nature of the business, market conditions, and access to supports/resources, regardless of an individual's disability status. The level of challenges, however, may be related to both the type and severity of an individual's disability and certain aspects or contexts of self-employment. For example, in their qualitative study of eight entrepreneurs with cognitive disabilities, including seven individuals with mental retardation and one individual with Traumatic Brain Injury, Hagner and Davies [12] found the business owners had expressed that the major disadvantages of their self-employment experience were the labor-intensive nature

and difficulty managing a business, and the difficulty in receiving necessary services and support. The businesses either received subsidies or generated only enough revenues to cover expenses; the owners needed to supplement their income with SSI, Medicaid, and other jobs. Four of the businesses were operated essentially under the auspices of the disability service-provider agency [12].

### 3.1.3. Support in self-employment

For individuals with disabilities in the U.S., support in self-employment has typically meant relying on a patchwork of resources, including (a) financial assistance from family, disability services and VR agencies, government loans and grants, and community organizations; (b) personal support and services from Social Security and other agencies; and (c) business-related assistance and support from attorneys, accountants, business-development experts, and computer/information technology consultants and technicians [7, 12, 18, 22]. The availability and accessibility of resources to support self-employment remain foremost concerns, which the Iowa *Entrepreneurs with Disabilities* (EWD) program attempted to address. The evaluation of EWD [7] is *sui generis* in the research literature on self-employment of individuals with disabilities in the U.S. and will receive further attention and elaboration here.

The Iowa Entrepreneur's with Disabilities (EWD) was a statewide program to support self-employment of individuals with disabilities for multiple years by the Iowa Department of Vocational Rehabilitation Service (DVRS), Iowa Department for the Blind (IDB), and Iowa Department of Economic Development (IDED). The program recruited 509 residents with disabilities from across the state. After the participant-selection process, 112 individuals who were receiving services from the DVRS or IDB, were provided financial (typically \$10,000) and technical assistance to start, expand, or maintain their business. Individuals were required to provide at least 50% of needed capital. Technical assistance included accounting, legal advice, and business planning and management. When the program began, most of the participants were receiving less government assistance than they had during the selection process [7].

Businesses with EWD support were monitored monthly by the program and required to disclose financial information for two years or until they had reached self-sufficiency. The program defined success as DVRS case closure, which was done if a business “. . .

has received financial assistance, remains in stable operation, and shows a trend toward profitability” [7, pp.1609–1610]. From May 1, 1995 to August 1, 1999, case closure was given to 42 individuals: 42 were White, 33 were male, 39 had finished high school, 25 owned a service-oriented business, and 17 had, as their primary disability, an orthopedic disability, the largest category.

These research studies on self-employment focusing on the perspectives of individual with disabilities described a range of different entrepreneurial experiences and business ventures: jewelry sales, gift baskets, toys and painted wood figures, bulk-mailing service, home child-care services, artist, freelance journalist, party-balloons service, freelance motivational speaker, software consultant, and web-site developer [7, 12, 18, 22]. These experiences and business ventures not only indicate a diversity of interests among individuals with disabilities, but also represent a wide range of talents and abilities across different industries.

The perspectives of individuals with disabilities in the U.S. represent one distinct perspective of and answer to the question of the viability of self-employment for individuals with disabilities; the other comes from service professionals who support these individuals.

## 3.2. Professionals' perspectives of self-employment

Service professionals who support self-employment of individuals with disabilities can include counselors from vocational rehabilitation (VR) agencies, experts and consultants from small-business development centers (SBDCs), and providers from other social-service agencies. From the selected studies that examined self-employment from these professionals' perspectives, predominant emergent themes included professionals' attitudes about, roles in, and support for self-employment of individuals with disabilities.

### 3.2.1. Attitudes about self-employment

A more positive or favorable attitude toward self-employment by VR counselors has been associated with higher case-closures of clients in self-employment [5, 24]. Also, counselors' attitudes toward self-employment tend to be more positive if they have had positive experiences of clients in self-employment [5, 24]. Agency policies can also affect agency atmosphere and VR counselors' attitudes toward self-employment [5, 24].

Service region may affect VR counselors' attitudes toward self-employment of clients. For example, Ravesloot and Seekins [24] found in a survey of counselors from U.S. rural and urban regions that rural counselors rated self-employment statistically-significantly higher than did urban counselors. Rural counselors also were significantly more familiar with processes involved in self-employment. The counselors did not significantly differ on most of the ratings of what they believed to be critical attributes for self-employment: enthusiasm, persistence, intelligence, risk-taking, business-planning ability, their own financial backing, pleasing personality, and good organizational and social skills. A statistically-significant difference was found in the importance of experience in considering what type of business to own. Urban counselors rated this factor to be more important [24], and expressed greater satisfaction with clients' employment, training, and educational opportunities. Rural counselors expressed significantly greater dissatisfaction with transportation options available to clients, but were more satisfied with networking opportunities available to counselors [4]. If a problem was identified by both rural and urban counselors, it was usually perceived worse by rural counselors: "Rural counselors work in situations that are less conducive to achieving VR goals" [3, p. 12].

Some researchers have posited that for decades in the U.S., a core VR philosophy has been to help individuals with disabilities find wage and salary jobs working for others, not self-employment, because counselors are not trained in business development [9, 30]. That may be changing, however. In examining changes in agency policies toward self-employment from 1992 to 2002, Arnold and Ipsen [2] found, "Current policies are more positive toward self-employment" [2, p. 117]. On average, more necessary components of self-employment (e.g., market analysis, business plan, and finding resources) were addressed by policies in 2002, which also provided more guidance to counselors on self-employment initiation and follow-through by coordinating activities with small business-development professionals than was done in 1992 [2].

Some service professionals in the field of supported employment in the U.S. have deliberately not encouraged or promoted self-employment for individuals with disabilities with significant disabilities because of (a) fear that individuals would be in a solitary environment and socially isolated, (b) concern over not being able to provide adequate information to individuals about starting and maintaining a business, (c) belief

that a large majority of business ventures fail in their first year, and (d) caution that the direction and decision for self-employment not be confused with the service provider's own wish to be a business owner [8]. These viewpoints may well be rooted in the history of supported employment, which rarely included self-employment as an outcome of services before the 1990s. When it was, Callahan, Shumpert, and Mast [8] noted that self-employment was ". . . largely characterized by either retail businesses developed as a result of governmentally mandated 'set-asides' for persons with milder impact of disability in their lives (particularly from blindness) or in telemarketing of household goods by persons with more significant physical disabilities" [8, p. 76]. Ironically, for individuals with severe disabilities, the years of receiving services from various agencies and professionals may be contributing to their difficulty being as self-directed as they can be in self-employment [26].

### 3.2.2. *Role in self-employment*

In recent years, approximately 12% of working individuals with disabilities have earned an income from self-employment [14]. While many of those individuals have been supported as clients by VR agency services, since the late 1980s, the national VR case-closure rates in self-employment generally have remained between 2% and 3% [14, 30]. These rates represent the ratio of successful VR case closures in self-employment to the total number of VR case closures, which includes other types of employment.

Despite the relative stability of the national VR case-closure rates in self-employment over the past two decades, a recent summary of the "Rehabilitation Services Administration 911 Closure Reports for Fiscal Years 2003 to 2007" by Revell, Smith, and Inge [25] found noticeable differences in self-employment outcomes among some state VR agencies (50 states and D.C., "General and Combined" VR agencies). In the Fiscal Year (FY) 2007, Mississippi had the highest self-employment case-closure rate at 12.6%, followed by Wyoming at 7.9%, Alaska at 6.6%, and Maine at 6.0%. Mississippi also had the highest rates across these fiscal years. Additionally, in FY 2007, the national average-weekly earnings of \$396 in self-employment were higher than the national average-weekly earnings of \$350 in all Status 26 case closures. By comparison, Mississippi averaged \$439 weekly in self-employment and \$423 from all Status 26 closures, while Connecticut had the highest average weekly earnings of \$896 in self-employment and \$538 from all Status 26 closures [25].

The role of VR counselors in the self-employment of clients with disabilities may vary by service location. For example, Arnold and Seekins [6] found several statistically-significant differences between VR in U.S. rural and urban settings: (a) self-employment was used more commonly in VR case closures in rural settings than in urban settings, (b) counselors in rural settings averaged more self-employment closures during their careers than counselors in urban settings, and (c) factors of job availability, higher unemployment, slower growth rate, and lower wages contributed to greater likelihood of self-employment case closures in rural settings [6, 31]. Urban and rural VR counselors did not significantly differ in their caseload, level of education, years as counselor, or access to telephones and fax machines [3, 4, 6], but rural clients lived significantly farther from counselors' offices than did urban counselors from their clients [4].

### 3.2.3. *Support for self-employment*

Service professionals have cited financial costs of services and agency resources as important mediators of their support for self-employment of clients with disabilities. In their qualitative research study, Colling and Arnold [9] found that professionals in the focus group interview “. . . cited budgetary constraints, limited personnel, and diminishing resources as a reality of service delivery today” [9, p.38]. VR counselors' decision to support self-employment may also be influenced by their consideration of “. . . how long such placements last compared to others, the comparative return on investment, the levels of income produced by each placement type, or consumers' comparative satisfaction” [5, p. 17]. Others have expressed concerns that VR counselors are neither adequately trained nor equipped to provide resources and support to clients in self-employment [12], while also cautioning that counselors' final decision to support self-employment desires and goals might be based more on their assessment of clients' disability condition rather than on relevant business-related factors [26].

For service professionals and agencies facing resource constraints in service provision, multi-agency collaboration may provide a way of pooling expertise and finances to support self-employment of individuals with disabilities, albeit not without obstacles or challenges. For example, based on their focus-group interview, Colling and Arnold [9] asserted that interagency collaboration of service professionals “. . . could provide direct results for clients such as entrepreneurship training and increased probability of

a successful business” [9, p. 38]. They also found, however, that professionals admitted knowing little about one another and cited physical and organizational barriers as discouraging active collaboration; and those with collaboration experience did not characterize their relationships as active or engaged, citing funding-source accountability as a barrier [9]. On one side, the rehabilitation counselors “. . . expressed apprehension that small businesses or self-proprietorships may not lead to strong performance on the identified standards and indicators for which their programs are evaluated” [9, p. 38]. On the other side, experts from small-business development centers (SBDCs) expressed concerns that the entrepreneurs of individuals with disabilities were smaller and contributing less to their “bottom-line” than businesses they typically funded [9].

For some VR counselors, supporting or enhancing self-employment success entails aligning clients' individualized needs and reasons for self-employment, such as (a) increasing self-confidence and engaging in work that is meaningful, (b) increasing self-sufficiency and income, (c) resolving concerns over accommodations and mobility, (d) increasing control over scheduling and amount of work, and (e) greater community inclusion and participation [40]. Hagner and Davies [12] have recommended VR counselors receive basic training in self-employment to help clients make informed employment choices and (a) understand how self-employment can benefit individuals with disabilities, (b) recognize the types of supports needed to succeed in self-employment, and (c) identify reasons for choosing self-employment over other available employment options [12].

Incorporating elements of person-centered-planning may help service professionals support clients in self-employment [26]. This approach typically involves recognizing clients' strengths and skills, around which a number of external (e.g., technical legal, or accounting), organizational (e.g., advisory councils, co-ops), and other personal supports are built. In addition, professionals may want to discuss with clients certain contextual factors such as (a) understanding individual circumstances, abilities, and needs; (b) evaluating assumptions about self-employment; and (c) recognizing actual, available support and training resources [22]. Ultimately, as Arnold and Ipsen [2] assert, “There is no cookie-cutter method for achieving a self-employment outcome. Each agency's policy and set of operational procedures are unique, reflecting the state's fiscal constraints and its approach to self-employment” [2, p. 117].

## 4. Discussion

Next, we discuss our findings to answer the question of viability of self-employment for individuals with disabilities in the U.S., as well as acknowledge the limitations of our literature synthesis. We conclude with the implications of our paper for stakeholders and recommendations for research and practice.

### 4.1. Viability of self-employment

From analyzing the selected studies, we have found that (a) researchers have examined self-employment of individuals with disabilities from the perspectives of individuals and service professionals, and (b) success in self-employment appears to be influenced most by three factors, which are personal characteristics, level of supports, and accountability systems.

Among the few studies that examined the self-employment perspectives of individuals with disabilities, the evaluation of the Iowa EWD program by Blanck, Sandler, Schmeling, and Schartz [7] is unique for its breadth and depth. The study suggests that certain characteristics of individuals with disabilities may predict VR self-employment case closure: white, male, more than a high-school education, and with a less-severe disability. The study also suggests that a comprehensive empirical research on the viability of self-employment for individuals with disabilities is best conceptualized as a developmental process. Thus, a long-term view of self-employment viability is ideal, recognizing not only the need to carefully consider and study a complex array of factors affecting self-employment outcomes, but also to properly understand how the effects of those factors can differ significantly across individuals and change over time. For instance, while accepting that time can be a confounding factor in any developmental process, the level of supports in self-employment could differ based on individual characteristics such as ethnicity and gender, such that ethnic-minority females with disabilities may experience different levels of support over time than white males with disabilities. In addition, the effects of accountability systems can also differ based on VR agency policies, which can be significantly different across U.S. states. Other facets of accountability systems, such as local market competition and overall economic conditions, can also affect self-employment success or the degree to which the levels of support in self-employment change.

The empirical research studies that examined self-employment from the perspectives of service professionals, particularly those of VR counselors, reveal interesting juxtapositions. While agencies policies and counselors now generally have a more favorable view of clients' self-employment than in the past, they are neither less cautious nor less concerned about the financial costs of service provision and agency accountability for outcomes. Also, they emphasize the importance of interagency collaboration to share expertise and limited resources to support clients, but admit agency barriers have curtailed active or engaged collaboration. Some contend that in the U.S., the core VR philosophy of helping clients attain wage and salary jobs, and not self-employment, remains fundamentally unchanged; and that VR counselors really need training in self-employment to effectively support clients [12]. That core VR philosophy appears to be yet another facet of accountability systems that affects self-employment level of supports and case closure. Perhaps not surprisingly, self-employment rates have been higher for individuals with disabilities outside the VR system [23].

Notable among the selected studies examining service professionals' self-employment perspectives was finding the statistically-significant differences between two groups of VR counselors. Those in rural areas of the U.S. had more self-employment case closures and expressed more positive views of self-employment than did their counterparts in urban areas, citing negative economic conditions of rural areas as a major reason for the higher case closures [6, 24]. These findings seem congruent with a recent analysis [25], which found that in a number of predominantly rural states, including Mississippi, Wyoming, Maine, and Alaska, self-employment case-closure rates have been much higher than the average national rates for several years. While the differences among states were not statistically analyzed for significance, these findings nevertheless suggest that cost-effective VR service provision does not preclude self-employment as an outcome. Faced with particular economic conditions in rural areas, such as chronically limited employment options and job openings, rural VR counselors may be more frequently compelled to take a service approach requiring greater service flexibility and client self-sufficiency, while also trying to remain aligned with agency policies and goals. This also could be a circumstance where facets of accountability systems are disproportionately influential.



## 4.2. Limitations

The primary limitation of this literature synthesis is the small number ( $N=12$ ) of U.S. empirical studies that met the selection criteria. Certainly, no causal inferences or broad generalizations can be made from our findings. The fact that constraints are present in any research study, though, does not explain why only a small number of U.S. empirical studies have been conducted on the topic and only since the mid-1990s. This becomes readily apparent when one searches the research literature and finds that a much greater number of U.S. empirical studies during the last two decades have been conducted on individuals with disabilities in other types of employment, such as supported and competitive-wage employment working for others.

Another limitation of this article is the exclusion of non-U.S. empirical studies. Particularly compelling are studies from international development that have examined microfinance programs [11, 30]. These programs typically provide small loans to fund new business ventures with five or fewer employees [11, 30, 40]. Individuals with disabilities in developing countries, especially from impoverished rural communities, have had success in microfinance ventures. Evaluations of these programs have described success not only in terms of poverty alleviation, self-sufficiency, and skill-development, but also in terms of self-determination, self-worth, and a sense of community [17, 20, 28].

## 4.3. Implications for research and practice

The tentative indications that individuals with disabilities can succeed in self-employment under certain conditions involve a number of stakeholders. Thus, the viability of self-employment is an important issue for individuals with disabilities, researchers, the business community, government agencies (e.g., VR), non-governmental organizations, and schools. The implications for research and practice are discussed in turn.

### 4.3.1. Implications for research

The small number of U.S. empirical studies suggests research challenges ahead, but also opportunities. Empirical research of the viability question likely will continue to encounter methodological challenges, starting with how self-employment success can best be defined and assessed. In that space, however, will exist a certain degree of research freedom to refine data collec-

tion and analytic methods that ultimately could improve our understanding of how individuals with disabilities can sustain self-employment success over time.

Moving forward, researchers should empirically examine self-employment viability as a developmental process, which will necessitate conducting longitudinal studies. Conceptualizing self-employment viability as a developmental process focuses the research on changes that occur across time. An accumulation of such studies will add to our understanding of the factors that lead to sustained self-employment success and its viability for individuals with disabilities. The next major methodological step will be to test specific effects of a program or an intervention on self-employment outcomes across comparison groups of individuals with disabilities over time. This would allow for broader research generalizations. Eventually, with a substantial number of empirical studies, researchers may be able to conduct meta-analyses and develop theories.

Future empirical studies should also examine the impact of new internet technology and social networking media on the viability of self-employment for individuals with disabilities. For example, researchers could examine the relationship between factors of accessibility and usability of internet technology and self-employment outcomes; and make comparisons across different types of business ventures and with traditional wage/salary employment. In all instances, empirical research should strive to accumulate valid and reliable evidence over time through rigorous empirical research design, data collection, and analysis [33].

### 4.3.2. Implications for practice

Although the Iowa EWD program was an example of the unique role of government in supporting individuals with disabilities in self-employment, its stringent selection process with a substantial capital requirement may have limited its potential impact, which also underscores a persistent significant financial barrier. Thus, state and federal government agencies could expand their support of self-employment for individuals with disabilities through the establishment of microfinance development funds outside the VR system.

Microenterprise programs in the U.S. have had a mixed history of success. For example, Americans with Community Cooperation (ACCION) in 1998 reported an increase in income for individuals who started a microenterprise with financial assistance [40]. Elsewhere, analyses of Unemployment Insurance Self-Employment Demonstration and

Self-Employment Investment Demonstration programs concluded that these types of programs help the poor, but not in large numbers [28]. Moreover, those who were helped or succeeded were typically not the poorest or least educated. Schreiner and Woller [29] posit that, due to cultural factors, microenterprise programs in the U.S. face much more difficulty than those in developing countries. A major caveat about these analyses, however, is that those microenterprise programs did not include participation by individuals with disabilities.

Increasing cross-training of government service-agency personnel also may produce more frequent and effective interagency collaboration [9]. For example, anecdotal monitoring and evaluation of phone calls to the Small Business and Self-Employment Service (SBSES), which provides information, referrals, and counseling about self-employment for individuals with disabilities, indicated that current systems are probably insufficient to support individuals with disabilities who want to become self-employed [40]. Unfortunately, many of the callers had expressed frustration with VR and the Social Security Administration for not taking full account of their employment and other needs during service provision. Collecting and using such information in evaluating agency policies and training service personnel would help build effective and efficient support systems for their clients in self-employment.

Lastly, schools can play a major role in preparing students with disabilities to explore self-employment in adult life. For example, students' required transition plan in their Individualized Education Program (IEP) could include relevant coursework and experiential opportunities, such as school-year internships or summer mentorships similar to the "Partners for Youth with Disabilities – Young Entrepreneurs Project" in Boston [34]. Collaboration between schools and businesses are necessary, and concrete post-school planning must be a priority.

## 5. Conclusion

The modern U.S. economy is globalized and continues to evolve, which was underscored by the two recessions that book-ended the last decade. Traditional wage and salary employment is also changing and being redefined. Advances in computer and smartphone technology, in particular, are broadening our view of commerce; and the new social networking media are revolutionizing peer-to-peer and niche marketing. In the 21st century, self-employment can be a

catalyst for expanding work opportunities and improving outcomes for individuals with disabilities. Our analysis and synthesis of U.S. empirical-research studies from the professional literature represents one of – what is sure to be – many steps to follow in answering the question: How viable is self-employment for individuals with disabilities in the United States?

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