Heterogeneity of Older Learners in Higher Education

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Abstract: Recent years have seen growing recognition of the importance of a college-educated workforce to meet the needs of employers and ensure economic growth. Lifelong learning, including completing a postsecondary credential, increasingly is necessary to improve employment outcomes among workers, both old and young, who face rising demands for new and improved skills. To satisfy these needs, many states have established postsecondary completion goals pertaining to the segments of their population ages 25 to 64 years. Although it is not always clear how completion goals will be attained for older students, it is widely recognized that community colleges will play an important role. Here, we use data from the Integrated Postsecondary Education Data System (IPEDS) to examine enrollment trends by part-time and full-time status for students enrolled in Ohio's public postsecondary institutions from 2006 to 2014. Unlike previous research that considers all students 25 and older as a homogenous group, we divide older learners into two groups: ages 25 to 39 and ages 40 to 64. We find that adults in these age groups who attend a public college are more likely to attend a community college than they are a four-year institution and are more likely to attend on a part-time basis. We discuss the implications of these trends and their relevance to college administrators.

Heterogeneity of Older Learners in Higher Education in the U.S.

Middle-aged and older workers represent an important segment of the labor force in the U.S., with adults ages 40 to 64 accounting for nearly half of all workers (U.S. Bureau of Labor Statistics [BLS], 2017). People are remaining in the labor force at older ages for multiple reasons, including increased longevity and better health, as well the shift from defined benefit to defined contribution pension plans (Munnell, Aubry, & Crawford, 2015). Although labor force participation rates (LFPR) for both males and females in the 55 to 64 age group have increased over the past several decades, the same is not true for males in the 45 to 54 age group. Labor force participation rates for males in this age group were 89% in 1996 but are projected to fall to 85% by 2026 (U.S. BLS, 2017).

There is a substantial variation in LFPR depending on level of education. For example, in July, 2018 the LFPR for individuals between the ages of 45 and 54 with only a high school diploma was 76% whereas 83% of those with an associate's degree and 88% of those with a bachelor's degree or higher were in the labor force (BLS, 2018a). New "good jobs," which Carnevale, Strohl, Cheah, and Ridley (2017) define as paying $35,000 per year for those under age 45 and $45,000 per year for ages 45 and older, usually require some level of education beyond high school. Over the past several decades, good jobs for individuals with an associate's degree grew by more than 80%, whereas good jobs requiring only a high school degree declined. Since 1991, Ohio's blue-collar jobs experienced a decline of 24% while gaining 13% in skilled service jobs (Carnevale, Strohl, & Ridley, 2017). In sum, a high school diploma alone is no longer adequate in today's labor market.

While unemployment rates were lower for older adults as compared to younger age groups during and following the Great Recession, which lasted from December 2007 until June

2009 (National Bureau of Economic Research, 2018), older adults experienced substantially longer durations of unemployment as compared to younger workers (Cummins, 2015; Rix, 2013), suggesting the need for skill upgrading to become reemployed. Adults ages 55 to 64 who become unemployed are still experiencing long durations of unemployment: in July, 2018, the mean duration of unemployment for this age group was 34 weeks as compared to 19 weeks for individuals 25 to 34 years of age (BLS, 2018b). Older adults who are unemployed for long periods of time often experience losses in pension and retirement sources, jeopardizing economic security in retirement and, for some, forcing extended working years (Munnell, 2015). Education and training are key tools to address these problems (Elman & O'Rand, 2002; Jacobson, LaLonde, & Sullivan, 2005).

Importance of Postsecondary Credentials

Advanced technologies and automation in a global economy have increased the need for continual skill upgrading. A skilled and credentialed workforce is recognized more and more as necessary for economic growth. By 2020, an estimated 65% of all jobs will require postsecondary education and training, a substantial increase from 28% in 1973 (Carnevale, Smith, & Strohl, 2013). Despite the demand for a well-educated labor force, only 46% of individuals ages 25 to 64 in the U.S. have an associate's degree or a higher-level credential. Ohio's proportion with an associate's degree or higher is similar at 45% (Flood, King, Ruggles, & Warren, 2017). These figures hide considerable heterogeneity within this large age range. Data from the 2017 Current Population Survey (CPS) demonstrate that 48% of 25 to 39 year-olds in the United States have obtained an associate's degree or higher, as have 49% of 40 to 49 year-olds, but only 43% of adults ages 50 to 64 have completed an associate's degree or higher. Ohioans in the 50 to 64 age group with an associate's degree or higher is 39%, well below the

U.S. average (Flood et al., 2017). Nettles (2017) projects it will take until 2056 for 60% of the 25 to 64 age group in the U.S. to attain a postsecondary credential, with wide variations based on race, ethnicity, gender, and age.

Drawing on the work of Carnevale et al. (2013) and the Lumina Foundation's (2017) strategic plan, Ohio established a goal that 65% of its residents ages 25 to 64 will have an associate's degree, certificate, or other postsecondary credential of value by 2025 (ODHE, 2017) and 40 other states have established similar goals (Lumina Foundation, 2017). In order to meet the needs of Ohio's employers, the Ohio Department of Higher Education (2016) estimates that an estimated additional 1.7 million adults will need to attain a high-quality postsecondary certificate or degree.

Postsecondary credentials are increasingly important for adults of all ages. However, they may be especially important for middle-aged and older adults as a means to indicate to employers that they are motivated and capable of learning new skills, and to signal other unobservable attributes, such as motivation, character, perseverance, and work ethic, as suggested by signaling theory (Cummins, 2015; Weiss, 1995). Moreover, globalization and automation along with more rapid skill obsolescence have increased the need for investments in human capital to ensure productivity among those currently in the workforce (Becker, 1962; Cummins, 2015; Farkas, 2009; Schuetze, 2007). Like other forms of capital, human capital is prone to depreciating over time (Schultz, 1961), again supporting the notion that continual investment is needed, particularly in a rapidly changing technological environment.

Empirical studies have identified complex relationships between age and human capital investment. For example, analyzing 1995 National Household Education Survey data, Simpson, Greller, and Stroh (2002) found varying patterns of investment in human capital across age

groups. Late career workers (50-65) were more likely to participate in credentialing programs, formal job-related training, and computer-based on-the-job training compared to younger workers (Simpson et al., 2002). These findings suggest that patterns of investment in human capital vary across age groups, but not in the way a tripartite model of the life course would suggest (cf. Sterns, 1986).

Purpose of this Study

Public community colleges provide an ideal setting for middle-aged and older adults to improve their skills and obtain a credential (Bahr & Gross, 2016). Open enrollment policies and low tuition as compared to baccalaureate institutions make them especially attractive to adult learners. In both Ohio and the U.S., well over half of adults in this age group who enroll in a postsecondary institution attend a public community college (U.S. Department of Education [USDE], 2014). Of those, about three-quarters attend on a part-time basis (USDE, National Center for Education Statistics [NCES], Integrated Postsecondary Education Data System [IPEDS], 2014). Yet, our knowledge about this group is limited since most research that examines older learners treats all students 25 years of age and older as a homogenous group (e.g., Bean & Metzger, 1985; Calcagno, Crosta, Bailey, & Jenkins, 2007; Sorey & Duggan, 2008). There are many reasons to think that doing so may hide important heterogeneities. As noted earlier, CPS data show that middle-aged and older adults are substantially less likely to have attained a postsecondary credential than are younger adults. Thus, following a job loss, this older group may be especially in need of retraining or skill upgrading in order to obtain employment. Family structure is also a notable and relevant difference between older and younger adults. While adults in their 20s and 30s are more likely to be single or in the early stages of marriage and family formation, adults over 40 are more likely to be married and to have

children attending college (Cohn, 2011; Family Income by Selected Characteristics, 2016) and may also have responsibilities for aging parents (Pierret, 2006). These differences point to the unique challenges faced by older workers and students. For example, adults over 40 may need to remain employed to pay for the education of their children and therefore have less financial and temporal flexibility to obtain retraining compared to a younger, single adult. Most education research examines ages 25 and older as a group and enrollment patterns may differ for subgroups within that broad age category.

Informed by these broader issues, and focusing on public postsecondary institutions in Ohio, we address the following research questions:

(1) Among students ages 25 to 39 and 40 to 64, do greater proportions enroll at a community college as compared to a baccalaureate institution and do the patterns vary by age group?

(2) Among students ages 25 to 39 and 40 to 64 enrolled at a community college, do greater proportions enroll on a part-time basis as compared to full-time and do the patterns vary by age group?

Given well-established differences in economic well-being and family structure between younger and older students, described earlier, as well as some evidence that late career workers differ in how they approach obtaining credentials and training (see Simpson et al., 2002), we expect to see notable differences in enrollment patterns between these two age groups. While the majority of adult students attend community colleges (USDE, 2014), we include baccalaureate institutions in our analysis to gain a better understanding of their enrollment patterns.

Methodology

Date source

Data come from the Integrated Postsecondary Education System (IPEDS, 2006 - 2014) and Jaquette and Parra (2016a, 2016b). IPEDS data are collected annually by the National Center for Education Statistics from every Title IV-eligible college, university, and technical/vocational institutions in the United Sates (U.S. Department of Education, NCES, IPEDS, 2014). We limit our analyses to 22 of the 23 public Ohio community colleges and all 14 public Ohio universities. Rio Grande Community College is excluded from our analyses due to its unique structure, which affects the comparability of reported data. Rio Grande Community College, a public community college, is a combined with the University of Rio Grande, a private baccalaureate institution, and reports data to IPEDS as a single institution, which prevents decomposition of community college data for this school.

We selected Ohio for this analysis because of both the number of community colleges in the state and the number of students enrolled. In 2014, Ohio ranked sixth in the U.S. in total enrollment in public two-year institutions (Ma & Baum, 2016) and ranks seventh in the total number of community colleges (Phillippe & Sullivan, 2005). Additionally, as a larger population state, Ohio data are less subject to erratic changes from year to year that are typical when sample sizes are small. Last, with a median age just over 39 years, Ohio ranked as the 15th oldest state in 2010, providing for potentially sizeable enrollments of older students (U.S. Census Bureau, 2011). This analysis is part of a larger study currently underway that is examining educational and labor market outcomes for older students enrolled in Ohio's community colleges.

Analysis

We focus our analyses on the period from 2006 to 2014, which includes the potential effects of the Great Recession on enrollment trends among older students. Of note, enrollment data are not available for seven of the community colleges in odd numbered years over this period (e.g., 2005, 2007, etc.). We, therefore, limit our analyses to the years 2006, 2008, 2010, 2012, and 2014. We map trends in adult student enrollment using end of semester enrollment counts. Adult students typically are collapsed into a single group of 25 to 64 year-olds. We divide this group into 25 to 39 year-olds and 40 to 64 year-olds to explore heterogeneity among older students. The age of 40 years is used as a cutoff between groups because 40 is the lower threshold to which federal civil rights protections apply with regard to age discrimination (U.S. Equal Employment Opportunity Commission, 2018).

Limitations

Our study has several limitations. We have focused on only one state to explore enrollment patterns among older learners. While Ohio is comparable to a number of the larger states in the U.S., and it has a geographically diverse postsecondary institutions and includes a substantial mix of urban and rural geography, findings in other states could differ. In particular, states with very different geographical characteristics and populations may show different enrollment patterns. Future research should explore whether similar enrollment patterns also are found in large rural states (e.g., Montana) and highly population dense urban states (e.g., Rhode Island). Additionally, we noted declining enrollments in 2014 following a period of increased enrollments resulting from economic pressures due to the Great Recession. As IPEDS data

beyond 2014 become available, it will be important to see whether these declining enrollment patterns continue, stabilize, or even reverse.

Results

More than 115,000 students ages 25 to 64 were enrolled in Ohio's 14 public universities and 22 public community colleges each year from 2006 to 2014. Although most of these students are 25 to 39 years of age, a meaningful fraction of older student enrollment is made up of adults ages 40 to 64, and that fraction peaked at 15.3% in 2012. It is interesting to note that students under age 18 represented 4.1% of community college enrollment in Ohio and increased to 8.3% in 2014, which coincides with stronger emphasis on dual enrollment programs. Table 1 shows enrollments by age group in Ohio community colleges between 2006 and 2014.

INSERT TABLE 1 AHOUT HERE

Enrollment at Community Colleges Compared to Baccalaureate Institutions

Enrollments for Ohio's working age adult learners (ages 25-64) increased substantially during and for a period following the Great Recession, which ended in 2009. Total enrollments, including both part-time and full-time enrollments, for the 25 to 39 age group peaked at community colleges in 2012, when a total 67,067 students were enrolled. This pattern is mirrored for 40 to 64 year-old students with peak community college enrollment 30,169 in 2012 (see Figures 1 and 2). At baccalaureate institutions, the same, but less pronounced pattern is observed with a 2012 peak enrollment for both 25 to 39 year-olds (43,829 students) and 40 to 64 year-olds (15,149 students). In recent years, U.S. patterns for community college enrollment for these age groups is similar to that of Ohio (NCES, 2011, 2016). Among older students, those from the 40 to 64 year-old group have a stronger preference for community colleges compared to 25 to 39

year-old students: in 2014, 59% of 25 to 39 year olds were enrolled at a community colleges as compared to a baccalaureate institution whereas 64% of 40 to 64 year olds were enrolled at a community college.

INSERT FIGURES 1 AND 2 ABOUT HERE

Community College Part-Time versus Full-Time Enrollment

In 2014, of Ohio's learners' ages 25 to 64, about 61% who attended college attended a community college and, of those, 74% attended on a part-time basis. There are, however, differences in these patterns between the 25 to 39 age group and the 40 to 64 age group, with the older group being more likely (65% versus 59%) to attend a community college and also more likely (77% versus 72%) to attend on a part-time basis. Because the majority of adult students attend community colleges, we focus on those institutions for our analysis of part-time and full-time enrollment patterns.

Patterns for ages 25 - 39

Total community college enrollment for the 25 – 39 age group peaked in 2012 at 67,067 and declined to 56,114 in 2014. Part-time community college enrollments for 25 to 39 year-olds are substantially higher than any other enrollment group, peaking at 43,742 in 2012, declining to 40,371 in 2014. Indeed, part-time community college enrollments for this age group are typically about double the levels of full-time community college enrollments. While both part-time and full-time enrollment declined between 2012 and 2014, full-time enrollment declined substantially more, both in absolute numbers and as a proportion of total enrollment (see Figure 3).

INSERT FIGURE 3 ABOUT HERE

Patterns for ages 40 - 64

Figure 4 shows trends for 40 to 64 year-old community college students and, although similar in many respects, reveals some important differences compared to 25 to 39 year-old students. As noted earlier, the older age group is more likely to attend part-time (77% vs 72%). Similar to their younger counterparts, all types of enrollments peaked in 2012 from their pre-recession lows. Likewise, all enrollment types, decline in 2014. Part-time community college enrollment far exceeds full-time enrollment throughout the period of analysis, typically being double or greater than full-time enrollment. As with the 25 – 39 age group, between 2012 and 2014, full-time enrollment declined substantially more, both in absolute numbers and as a proportion of total enrollment.

INSERT FIGURE 4 ABOUT HERE

Discussion

Little research has examined the heterogeneity of working-age adults (age 25 to 64) with regard to their enrollment patterns at institutions of higher education. We focus explicitly on this group and explore differences between students ages 25 to 39 compared to those aged 40 to 64. Our results indicate a number of similarities between these groups. The effects of the economic downturn known as the Great Recession are clearly evident in enrollment patterns of all older adult learners as significant increases in enrollment are observed for both 25 to 39 year-olds and 40 to 64 year-olds during and following that period. Moreover, this increased enrollment is found for both groups regardless of enrollment location (baccalaureate vs. community college) or enrollment status (full-time vs. part-time). Additionally, both age groups show enrollment declines by 2014.

Nevertheless, some notable differences emerge between these two groups. Part-time community college enrollment for the 25 to 39 age group is substantially larger than other categories examined. There is a consistent pattern of enrollments among 40 to 64 year-old students throughout the analysis, with part-time community college enrollment substantially exceeding full-time enrollment. During the period of very low unemployment rates currently experienced, part-time enrollment may be the only option available to many individuals. In addition, community colleges offer the skill upgrading many middle-aged and older adults desire to advance in their careers.

This preference for part-time enrollment among older adult learners is consistent with human capital findings that note substantially different investments in training based on age. Simpson and colleagues (2002) noted that older workers were more likely to engage in training that was on-the-job, work-related training in credentialing programs and less likely to work toward obtaining general skills, such as interpersonal and communication skills. Their results point to a similar conclusion—variation within the 25 to 64 year-old group may express the economic realities of human capital investment, with older students more focused on occupational skills as compared to younger students. While all older learners clearly favor the community college setting (the highest enrollments for all 25+ students in Ohio from 2006 to 2014 are in this location), more older students over the age of 40 have an additional tendency toward part-time enrollment.

Implications and Conclusions

Enrollment patterns discussed are likely well known to community college educators, but the implications of these patterns merit further exploration. Middle-aged and older workers are increasingly important to economic growth in the United States, and continued skill upgrading

across the life is course is needed to ensure a workforce that is competitive in a global and technological advanced economy and to meet credential attainment goals. Despite the importance of lifelong learning (Cummins & Kunkel, 2015) and credential attainment, enrollment by the 25 to 64 age group at community colleges has declined in the recent post-recession years. This decline is consistent for both 25 to 39 year-old and 40 to 64 year-old students and for full- and part-time enrollment. Older students are more difficult to recruit than high-school students; they are more dispersed and may be reluctant to return to college if they have not been in a classroom for an extended period or lack self-confidence about their ability to succeed (Blumenstyk, 2018; Fletcher, Hansson, & Bailey, 1992). Identifying strategies to increase enrollment by this age group, and building an institutional environment with services and supports to maximize their chances of success, are important both for maintaining a viable labor force and to increase the likelihood of economic security in retirement. Adult students tend to work more hours per week than traditional age students (Carnevale, Smith, Melton, & Price, 2015), which can limit their ability to utilize college services and supports, especially if those services are not available in the evenings or on weekends. The availability of student services at times that are convenient is necessary to facilitate enrollment and success of adult students.

As noted earlier, the Ohio Department of Higher Education (2017) estimates that, by 2025, an estimated additional 1.7 million adults will need to attain a high-quality postsecondary certificate or degree to meet employer needs. A 2017 report by the Lumina Foundation (2017) observes that, nationwide, as many as 5.5 million additional postsecondary credentials could be awarded to an additional American workers by 2025. A relatively untapped segment of this market for postsecondary credentials are middle-aged and older individuals who exited the labor force but, if retrained in a new occupation, could return to the work force. Because a high

proportion of adult learners attend public community colleges on a part-time basis, it is critical that these institutions provide flexible scheduling to encourage enrollment by both employed and un/underemployed older students. This is especially important in periods of low unemployment, as are currently being experienced. Further research is needed to identify specific strategies to market to this age group and to ensure that programs and services are tailored to meet the unique needs of older students so they can achieve their educational goals. Given the differences found between the younger portion of older learners compared to learners over age 40, it is important that any such strategies accommodate heterogeneity among older learners.

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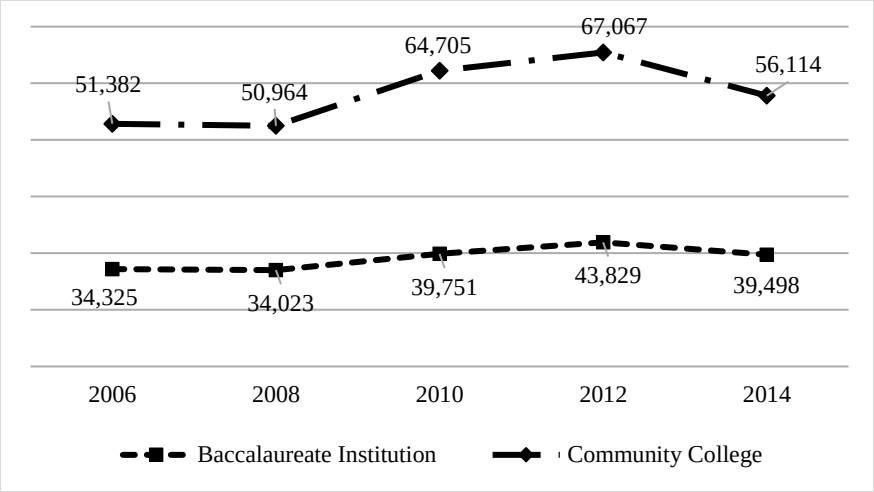

Figure 1.
Ohio Public Postsecondary Total Enrollment Ages 25 - 39, 2006 - 2014.
Sources: IPEDS, 2006 - 2014; Jaquette & Parra, 2016a, 2016b.

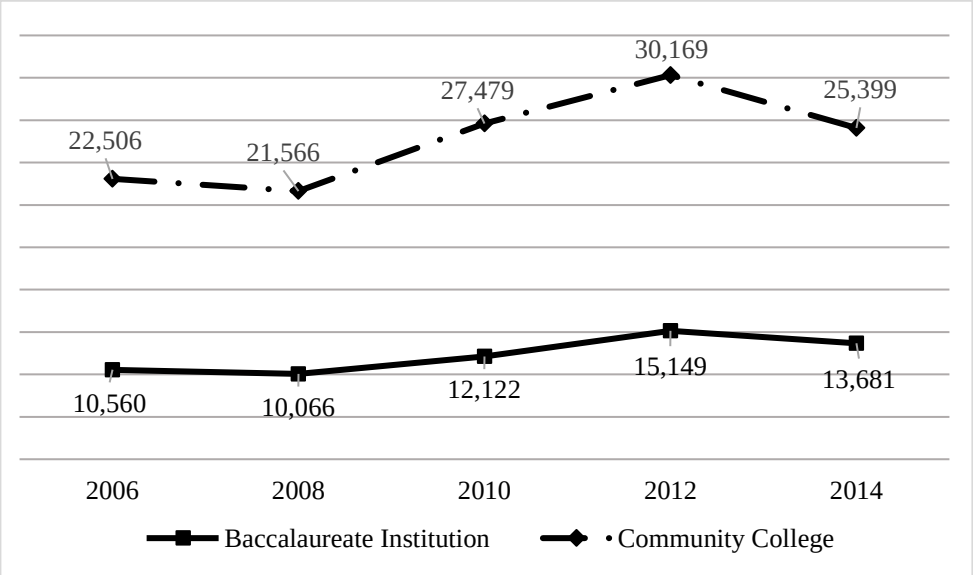

Figure 2.
Ohio Public Postsecondary Total Enrollment Ages 40 - 64, 2006 2014
Sources: IPEDS, 2006 - 2014; Jaquette & Parra, 2016a, 2016b.

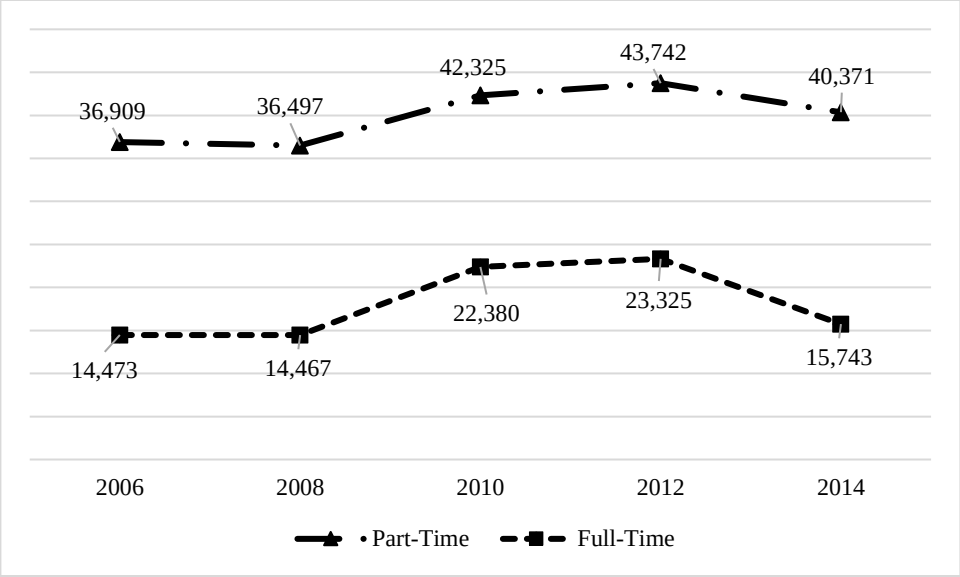

Figure 3.
Ohio Community Colleges, Part-Time and Full-Time Enrollment Ages 25 - 39, 2006 - 2014
Sources: IPEDS, 2006 - 2014; Jaquette & Parra, 2016a, 2016b.

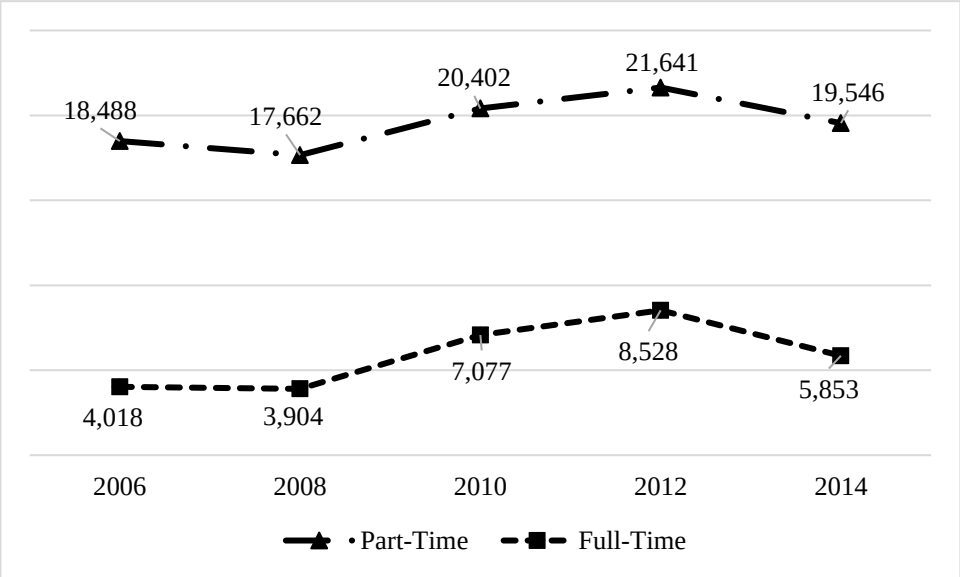

Figure 4.
Ohio Community Colleges, Part-Time and Full-Time Enrollment Ages 40 - 64, 2006 - 2014
Sources: IPEDS, 2006 - 2014; Jaquette & Parra, 2016a, 2016b.

Table 1.

Ohio Community College Enrollment by Age Group, 2006 - 2014 (percent)

	2006	2008	2010	2012	2014
Less than age 18	4.1	5.1	5.6	5.6	8.3
Ages 18 – 24	49.0	49.4	46.8	44.9	46.0
Ages 25 – 39	32.7	32.0	33.3	34.0	31.2
Ages 40 – 65	14.3	13.5	14.1	15.3	14.1
Age 65 and above	-	-	0.2	0.2	0.4

Sources: IPEDS, 2006 - 2014; Jaquette & Parra, 2016a, 2016b.