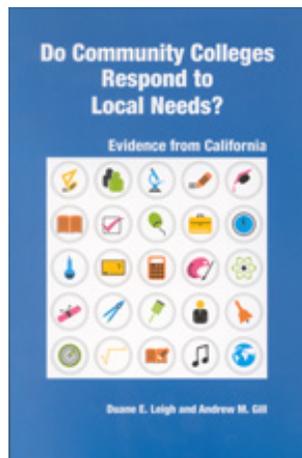

Upjohn Institute Press

Introduction

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Chapter 1 (pp. 1-13) in:

Do Community Colleges Respond to Local Needs?: Evidence from California

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Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 2007

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Introduction

American community colleges are complex institutions committed to a number of different missions and to serving a variety of constituents. Historically, community colleges concentrated on two missions—supplying introductory college-level courses to students interested in transferring to a four-year college or university (the “transfer function”), and providing occupational training intended to equip program graduates with skills needed for jobs in the local labor market. Transfer and occupational training programs were typically designed for “traditional” students, namely, 18–22-year-old high school graduates attending college on a full-time basis.

Over time, community colleges have broadened their missions to include adult basic education and workforce development. Adult basic education refers to the important remediation function of providing a foundation of basic math, reading, and language skills (including English as a Second Language [ESL] programs) on which students can proceed to standard college-level academic courses or to occupational training programs. In their workforce development role, community colleges serve a key economic development function by developing training programs that assist their communities in retaining existing employers and attracting new ones. Such programs are commonly referred to as “contract training,” that is, courses and programs offering occupational education or adult basic skills specifically designed for a particular employer or public agency. Contract training courses are often offered off campus at a site designated by the contracting agency.

The primary constituents of a community college are students, local employers, and local government officials. The broadening of community college missions to include workforce development has meant an expanded role for the local business community and government officials in curriculum development. This broadening of missions has also been accompanied by greater diversity within community colleges’ student bodies. Community college students now include adults returning to school to sharpen their skills or earn a college degree, dislocated

workers and returning homemakers seeking retraining for new careers, single mothers making the welfare-to-work transition, and high school dropouts taking advantage of a “second chance” to join mainstream society. Most of these “nontraditional” students enroll on a part-time basis as they combine employment with school. In addition, community colleges frequently serve as the point of entry for immigrants—whether they are traditional or nontraditional students—into the U.S. system of higher education.

Community colleges currently face a myriad of accountability requirements at both the state and federal levels. The basic purpose of these requirements is to gain a sense of whether, in carrying out their missions, community colleges are successfully responding to the needs of their primary constituents. But this consideration leads to a further question. The question is how to define a responsive community college in a manner that allows us to measure empirically whether a college is responsive or not.

Answering this question is not easy because there are a number of alternative ways to think about responsiveness. Fortunately, help is available in the reports of the recent U.S. Department of Education (DoED) Community College Labor Market Responsiveness Initiative. In Volume 1 of these reports, MacAllum and Yoder (2004, p. 5) suggest the following definition of labor market responsiveness: “A labor market-responsive community college delivers programs and services that align with and seek to anticipate the changing dynamics of the labor market it serves. These programs and services address the educational and workforce development needs of both employers and students as part of the college’s overall contribution to the social and economic vitality of its community.”

There are four aspects of this definition that we wish to highlight. First, a labor market-responsive college addresses both the educational and workforce development needs of employers and students. This means to us that colleges that emphasize remedial training as well as those that emphasize transfer programs are potentially just as labor market responsive as a college that interacts with local employers in a workforce development program that trains workers for specific jobs. In other words, what makes a college labor market responsive is that the ultimate goal of college programs is a successful labor market outcome.

Second, the DoED definition emphasizes that community colleges are primarily community-based organizations. Hence, it is important in assessing their performance to gain a sense of whether community colleges are meeting the needs of residents and employers in their local communities. Third, recognition of the dynamic nature of local labor markets suggests that responsive community colleges must look ahead to try to anticipate the needs of local students and employers.

Finally, dynamic labor markets are generated by change on both the demand side and the supply side. On the demand side, the major source of change is constantly shifting labor demand conditions brought about by changing technology and the forces of globalization. On the supply side, we suggest that the main source of change is the massive changes in number and national origin of immigrants into this country over the past 40 years.

These considerations lead us to explore two specific research questions that we believe are of contemporary policy concern:

Research Question 1: Are community colleges meeting the education and training needs of current and recent generations of immigrants?

Research Question 2: Do community colleges respond to changing demand conditions by providing occupational training programs that produce skills that are marketable in the local economy?

Two points should be made at the outset regarding these research questions. First, the two questions are not independent. Occupational skills are clearly an important educational need of current and recent generations of immigrants. At the same time, immigrants have other educational needs, such as ESL, basic skills training, and college transfer courses. Similarly, native-born students, in addition to immigrants, seek training that produces skills marketable in the local economy.

In connection with Research Question 1, the second point is that we specify education and training needs in terms of outcomes rather than access. As described in Chapter 2, the low tuition and open-door admissions policies of California community colleges, as well as their convenient locations, provide ready access to higher education. This is also true for the community college systems in most other states. Given that many students are not prepared for college-level coursework, the more important challenge facing community colleges in California

and other states is to increase their effectiveness in helping students finish their programs of study. As stated recently by the chancellor of the California Community College System (CCCS), Marshall “Mark” Drummond, “[W]e have a great front door, the back door doesn’t work so well” (Paddock 2006).¹

Returning to the DoED initiative, researchers responsible for carrying out the study conducted site visits to over 33 community colleges serving 10 distinct labor market areas scattered across the nation. The objective of these site visits was to learn from community colleges viewed as labor market responsive in order to develop guidelines to help other colleges become more responsive to needs in their communities. These site visits yielded many interesting examples of how community colleges can strengthen linkages between the programs they provide and the needs of residents and employers in their communities. We discuss research outcomes of the initiative in more detail in Chapter 4.

Rather than making visits to selected community college campuses, we propose to answer our two research questions drawing on empirical results obtained from a comprehensive community college data set. Since public community colleges are often organized into statewide systems, this requires that we gain access to data supplied for all campuses in a particular state community college system. For several reasons, we choose to study data for the CCCS. These reasons are explained later in this chapter.

The next section provides justification for the statement that our two research questions are policy relevant, followed by a section that explains why we study data for California. The last section concludes with an overview of how the monograph is organized.

WHY THESE RESEARCH QUESTIONS?

Responsiveness to Meeting the Educational Needs of Immigrants

We begin by considering the very rapid recent growth in the number of immigrants into the United States. A key date is 1965, the year in which Congress passed the Immigration and Nationality Act. As described by Borjas (1987), the 1965 act made two key changes in U.S.

immigration policy: 1) it eliminated the system of national origin, race, or ancestry quotas for immigrants; and 2) it changed the emphasis in the allocation of visas toward family reunification and away from occupational preferences. Along with substantially increasing the number of immigrants, the act resulted in an important change in the geographic origin of immigrants, with more immigrants originating from Latin America and Asia and fewer immigrants from Europe.

Mosisa (2002) documents the effects of the 1965 legislation on the number and geographic distribution of immigrants. In terms of the growth in number of immigrants, he points out that between 1996 and 2000 the foreign born constituted nearly half of the net increase in the size of the entire U.S. labor force. The change in the national origin of immigrants is equally dramatic. In 1960, about 75 percent of the foreign born were European. By 2000, this percentage had dropped to about 15 percent, largely reflecting the influx of Latino and Asian immigrants. Of the top 10 leading countries of birth of the foreign-born population in 2000, 4 are Latin American (Mexico, Cuba, El Salvador, and Dominican Republic) and 5 are Asian (Philippines, India, China, Vietnam, and South Korea). Rounding out the top 10 is Canada. Mexico is by far the largest supplier of immigrants, followed by the Philippines. Over the 1996–2000 period, the foreign born represented about 83 percent and 65 percent, respectively, of the growth in the labor force of Asian Americans and Latino Americans.

What are the educational needs of these immigrants? Mosisa (2002) points out that recent immigrants are concentrated in two educational categories—those with a high level of educational attainment and those with a low level of attainment, with few immigrants falling in between. Latino immigrants are found in the low-education category. As reported by Mosisa, about 55 percent of the foreign-born Latino population age 25 years and older had less than a high school education in 2000, while only 9.5 percent had college degrees. On the other hand, Asian immigrants often possess a high level of education. In 2000, 46.5 percent of Asian immigrants had graduated from college, while only 15.4 percent had failed to complete high school.

The low level of educational attainment of Latinos—both immigrants and native born—recently received prominence in the final report of the President’s Advisory Commission (2003) on Educational Excellence for Hispanic Americans. In this report, the commission

notes that Latinos are now the largest minority group in the nation. At the same time, it makes the point that Latino students are far more likely to drop out of high school; if they graduate from high school, they are much less likely to earn a college degree than other population groups. Among high school graduates, Fry (2002) adds the information that while Latinos enroll in postsecondary institutions at about the same rates as other students, Latino students are much more likely to enroll in a community college as opposed to a four-year institution. In other words, Latino students appear to have roughly equal access to higher education, primarily through community colleges. But this access is not translated into transfers to four-year colleges and the earning of baccalaureate degrees.

As Mosisa indicates, however, not all immigrants are at a disadvantage in terms of educational attainment. In fact, there is currently a growing recognition of the crucial role played by immigrants and their children in preserving U.S. leadership in science and technology. A recent study by Anderson (2004) is informative. Some of the highlights of his study include the following:

- More than half of PhD engineers working in the United States are foreign-born, as are about 45 percent of mathematicians and computer scientists with PhD degrees.
- Nearly half (18 of 40) of the finalists of the Intel Science Talent Search in 2004 have parents who entered the United States on H-1B visas. Just 16 of the finalists have parents who were born in this country.
- Among the top 20 scorers of the 2004 U.S. Math Olympiad, 65 percent were the children of immigrants. Half of these 20 students were born outside the United States.

Anderson does not supply data on countries of origin for these immigrants. However, the particular individuals he describes are largely immigrants from Asian countries, including China, Taiwan, India, Vietnam, and South Korea. Also described in his article are high-achieving immigrants from a few other countries, including Russia, Romania, Hungary, and Israel.

In most states, the low tuition and open-admission policies of community colleges, coupled with their multiple locations, provide immigrants with a low-cost and convenient point of entry into the American

higher-education system. One question we seek to answer is whether community colleges supply the educational services necessary for Latino and Asian immigrant students to successfully transfer to four-year colleges and universities and earn BA degrees. However, a four-year college degree is not a prerequisite for success in the U.S. labor market. With this in mind, we also explore other educational outcomes for community colleges including receipt of an AA degree and total credits earned.

Responsiveness to Meeting Employers' Skill Requirements

In recent years, a significant concern of American workers and policymakers is the loss of domestic jobs to lower-wage workers residing in other countries. This concern initially arose in the context of manufacturing jobs exiting to China and other Asian countries and, as a consequence of the North American Free Trade Agreement (NAFTA), to Mexico. More recently, the outsourcing of call center and software engineering jobs to India received prominence in the national media and the 2004 presidential campaigns of President George W. Bush and Senator John Kerry.

The rapid pace of technological change and the relentless pressure exerted by global competition means that doors to job opportunities in growing sectors of the economy are continuously opening, while job opportunities in stagnant sectors are declining. The implication for policymakers is the importance of providing an educational and training system that is targeted to real employment opportunities. At the federal level, the Bush administration's response to the issue of job losses was the president's *Jobs for the 21st Century* initiative, the focus of which is to enhance the skills of American workers. The initiative identified the nation's community colleges as the educational institutions that are to play the central role in enhancing workers' skills. Specifically, the initiative proposed \$250 million in additional federal funding to community colleges that partner with local employers to provide training in high-demand skills. At the state level, in addition, legislation typically exists that explicitly directs community colleges to participate more directly in efforts to promote economic development and global competitiveness. While such legislation is quite recent in many states, Osterman and Batt (1993) describe state training initiatives that date back to the

early 1960s involving the strong community college systems in North Carolina and South Carolina.

Policymakers have clearly identified community colleges as the principal institutional provider of training services to adults looking for employment or seeking to retain an existing job. But while increased attention is being directed at community colleges in their role as suppliers of adult training services, relatively little is known about how successfully they perform this function. Our Research Question 2 asks how well community colleges are doing, in a dynamic and ever-changing economy, in meeting the challenge of supplying training that meets the skill requirements of employers in local labor markets.

WHY STUDY DATA FOR CALIFORNIA?

We examine the two research questions just outlined using data for California. There are a number of reasons for focusing on California.

1. A large number of immigrants. In the context of our first research question, Mosisa (2002) points out that as of 2000, about 60 percent of foreign-born workers resided in just four states. Of these states, California has by far the largest share of immigrants (30 percent), followed by New York (12.5 percent), Florida (9.3 percent), and Texas (8.9 percent). Table 1.1 compares for fiscal year 2002 the distribution of immigrants to California and the nation as a whole by region and selected countries of birth. As might be expected, Latinos and Asians are the major categories of immigrants to both the United States and California. Latino immigrants from Mexico, the Caribbean, Central America, and South America represent about 43 percent of all immigrants to the United States and about 49 percent of immigrants to California. Among Latino immigrants, Mexicans are by far the most numerous group for the United States as a whole, at slightly over 20 percent of all immigrants. Nearly half of all Mexican immigrants chose to settle in California.

The table also shows that in 2002, Asian immigrants represent just over 32 percent of all immigrants to the United States but that they represent almost 39 percent of all immigrants to California. Leading

Table 1.1 Distributions of Immigrants to the United States and California, by Selected Countries and Regions of Birth, Fiscal Year 2002

Region and country of birth	United States		California	
	Number	Percentage	Number	Percentage
Europe	174,209	16.4	24,082	8.3
Asia (all)	342,099	32.2	112,608	38.7
China	61,282	5.8	19,494	6.7
India	71,105	6.7	18,265	6.3
Philippines	51,308	4.8	21,971	7.5
Vietnam	33,627	3.2	13,126	4.5
Africa	60,269	5.7	5,839	2.0
Mexico	219,380	20.6	105,699	36.3
Caribbean	96,489	9.1	1,325	0.5
Central America	68,979	6.5	27,143	9.3
South America	74,506	7.0	7,955	2.7
All countries	1,063,732		291,216	

SOURCE: U.S. Citizenship and Immigration Services (2002, Supplemental Table 1).

Asian countries in terms of supplying immigrants to the United States are India followed by China, the Philippines, and Vietnam, respectively. The Philippines is the leading supplier of Asian immigrants to California, followed by China, India, and Vietnam.

Just as immigrants are not geographically distributed evenly across the United States, immigrants to California tend to be clustered in particular communities. In Table 1.2, we show California Department of Finance (n.d.) data on county of residence of legal immigrants in 2000. Nearly one-third of all immigrants to California chose to live in Los Angeles County, and nearly two-thirds settled in the top-five receiving counties. These data indicate quite clearly that immigrants are concentrated in the large metropolitan areas of southern and northern California.

2. A vast state economy. A second reason for examining California data is, in the context of Research Question 2, the size of its economy. According to Rand California (2003) data, California's gross state product for 2001 was about \$1.359 trillion, as compared to the U.S. gross domestic product for the same year of \$10.137 trillion. This would

Table 1.2 Distribution of Legal Immigrants to California, by Top Five Receiving Counties, 2000

County	Percent of immigrants
Los Angeles	33.1
Orange	9.9
Santa Clara	8.5
San Diego	6.9
Alameda	5.4

SOURCE: California Department of Finance (n.d.).

make California, if it were considered a separate nation, about the ninth largest national economy in the world. Baldassare (2006) estimates that California is the world's eighth largest economy. Writing in the *Wall Street Journal*, Carlton (2005) suggests that California's economy is even larger—the world's sixth-largest economy.

3. The size and visibility of the CCCS. A third reason for analyzing California data is the size and national visibility of the CCCS. Today, the CCCS is made up of 72 community college districts and 109 campuses serving over 2.5 million students. These campuses are scattered throughout the state servicing local labor markets ranging from sparsely populated rural areas in the southeastern California desert and northeastern California mountains to heavily populated metropolitan areas in Los Angeles County and Orange County. The CCCS is by far the nation's largest community college system. In addition to its size, the well-known 1960 *Master Plan for Higher Education in California* has served as a catalyst for the development of community colleges in many other states.

4. Availability of data. Finally, a wealth of data is available for California community colleges. Our primary data source for examining both of our research questions is student records for the 1996 cohort of first-time freshmen (FTF) attending all CCCS campuses. These administrative data were provided us by the Chancellor's Office. We supplement FTF data with two additional data sets. The first is college-level data collected for 108 of the 109 CCCS campuses in Gill and Leigh (2004). College-level data appended to student records are used to examine our first research question. For Research Question 2,

we also make use of local area occupational labor demand projections furnished, in cooperation with the Chancellor's Office, by the Labor Market Information Division (LMID) of California's Employment Development Department.

ORGANIZATION OF THE STUDY

Chapter 2 provides a brief discussion of the development of the CCCS. Included in this chapter is a summary of the main provisions of the 1960 *Master Plan*, as well as a discussion of how CCCS districts and campuses are organized, funded, and evaluated. The next two chapters provide an overview of the two distinct literatures relating to our research questions. In connection with Research Question 1, we summarize in Chapter 3 the literature examining the role of education in explaining labor market outcomes for Latino and Asian Americans. Next, we review studies using national data to estimate the effect of community colleges on overall educational attainment. The final section of the chapter discusses studies based on student records that measure the effect of attending a community college on educational outcomes for college students in general and immigrants in particular.

Chapter 4 provides an overview of the fragmented literature relating to our second research question. We begin by summarizing studies that estimate the labor market payoffs to attending a community college. Then we discuss available studies of the effectiveness of community college contract training programs and the research outputs yielded by the recent DoED Community College Labor Market Responsiveness Initiative.

Empirical results reported in Chapters 5, 6, and 7 are the heart of the study. Chapter 5 describes in detail our primary data source—the universe of FTF students enrolled at any CCCS campus during the 1996–1997 academic year. A wealth of information is available in this data set for individual students. The chapter describes the variables we construct measuring community college educational outcomes and explanatory variables, including race or ethnicity, immigration status, financial need, academic goals, progress while attending a community college, and college courses classified by the Taxonomy of Programs

(TOP) system. Since we know the college attended, we can also append to student records college-level information available from other sources.

Chapter 5 continues with documentation of gaps in community college outcome measures between Latino and white students and between Asian and white students. These gaps favor whites in comparison to Latinos, but Asians in comparison to whites. We then look for differences in student-level and college-level characteristics that might explain these ethnicity differences. We report substantial success in explaining the Latino-white gaps, but much less success in accounting for Asian-white gaps.

The analysis in Chapter 5 is carried out at the broad, or “one-digit,” level of ethnicity. In Chapter 6, we exploit the more detailed, or “two-digit,” information on ethnicity available in FTF data. Our success in explaining gaps in educational outcomes at the one-digit level carries over for the three disaggregated categories of Latino students. For Asian students, on the other hand, our record is mixed, depending on the particular ethnic group considered. The explanatory power of our empirical model is especially weak in terms of explaining the transfer rate of Vietnamese students, and the Vietnamese receive special attention in this chapter.

We switch gears in Chapter 7 by moving to the second of our two research questions. In this chapter, we develop and compare across colleges measures first of the supply of trained workers and next of the demand for trained workers, both classified by occupational TOP codes. Then we bring supply and demand together using an index of labor market responsiveness constructed for each individual college. Colleges are found to differ substantially in terms of their labor market responsiveness. We next seek to determine whether these differences in responsiveness can be explained by college-level and community characteristics. We find that measures of the financial capacity of colleges play a role in determining labor market responsiveness. Our main result is evidence suggesting that colleges that appear not to be particularly labor market responsive when examined in isolation may turn out to be part of community college districts that are substantially more responsive.

Chapter 8 summarizes the main results of the study and draws some implications for policy. We emphasize two main themes in this conclud-

ing chapter. One is that immigrant groups are quite different in terms of their backgrounds, aspirations, and experiences in California community colleges. Lessons learned from an analysis that takes account of these differences can be valuable in designing community college programs intended to assist immigrants. The second is that community colleges are complex institutions in terms of not only their missions but also in terms of their organization. In California, the organization of colleges into districts should be taken into account in any attempt to evaluate how successfully community colleges carry out their missions.

Note

1. Chancellor Drummond goes on to say that, “[W]e are set up to deal with the student of the ’80s. The students of 2006 are not like those students. The people who come to us are not that well prepared, and there is a wider diversity” (Paddock 2006).