

# Labor Market in Liechtenstein

Tara Iyer

SIP/2025/047

IMF Selected Issues Papers are prepared by IMF staff as background documentation for periodic consultations with member countries. It is based on the information available at the time it was completed on March 5, 2025. This paper is also published separately as IMF Country Report No 25/77.

**2025**  
**APR**



**IMF Selected Issues Paper**  
European Department

**Labor Market in Liechtenstein**  
**Prepared by Tara Iyer (EUR)**

Authorized for distribution by Kazuko Shirono  
April 2025

**IMF Selected Issues Papers** are prepared by IMF staff as background documentation for periodic consultations with member countries. It is based on the information available at the time it was completed on March 5, 2025. This paper is also published separately as IMF Country Report No 25/77.

**ABSTRACT:** Liechtenstein's labor market is characterized by a high reliance on non-resident workers, with commuters comprising the greater share of employment, particularly in higher-skilled occupations. With the steady inflow of skilled labor, infrastructure constraints have come into play and productivity has stagnated over time. Furthermore, a sizeable gender pay gap exists and the labor force participation of women and older workers remains relatively low.

**RECOMMENDED CITATION:** Iyer, Tara. 2025. "Labor Market in Liechtenstein." IMF Selected Issues Papers, SIP/2025/047. Washington D.C. International Monetary Fund.

JEL Classification Numbers:	J1, J3, J6, O4, E4
Keywords:	Labor Market Dynamics, Skills Shortages, Wages and Compensation, Mobility, Unemployment, Foreign Workers, Demographics, Productivity, Macroeconomic Policies
Author's E-Mail Address:	tiyer@imf.org

## SELECTED ISSUES PAPERS

# Labor Market in Liechtenstein

Prepared by Tara Iyer<sup>1</sup>

---

<sup>1</sup> The author would like to thank Mark Horton and Kazuko Shirono for their helpful comments and suggestions. The views expressed in this paper are those of the authors and should not be attributed to the IMF, its management, or its Executive Board.



# PRINCIPALITY OF LIECHTENSTEIN

## SELECTED ISSUES

March 5, 2025

Approved By

Prepared By Tara Iyer (EUR)<sup>1</sup>

## CONTENTS

<b>LABOR MARKET IN LIECHTENSTEIN</b>	<b>2</b>
A. Labor Market Characteristics: Cross-border Commuters and Foreign Nationals	2
B. Skills Mismatch and the Distribution of Wages	3
C. Infrastructure Constraints and Productivity	5
D. Increasing Labor Supply	6
E. Conclusion	7
 <b>FIGURES</b>	
1. Integration of Commuters in the Labor Market	2
2. Nationality of Workers in the Labor Market	4
3. Employment and Wage Distribution by Resident Status	4
4. Real GDP per Capita Decomposition	5
5. Labor Supply and Earnings by Gender and Age	6
 References	9

<sup>1</sup> The author would like to thank Mark Horton and Kazuko Shirono (both IMF EUR) and the Liechtenstein authorities for helpful comments and suggestions. Zhengting Yue provided excellent research assistance.

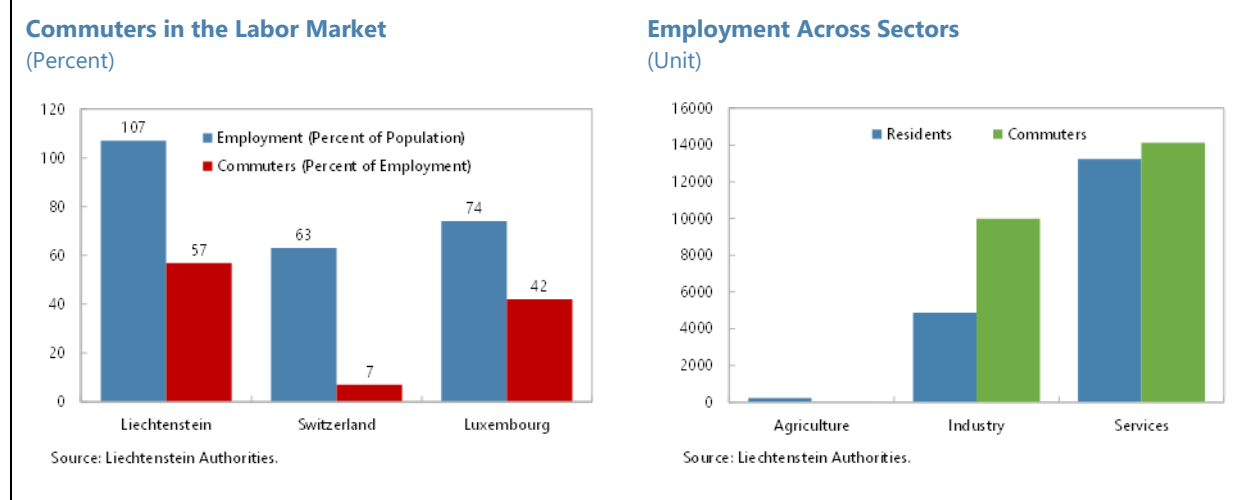
# LABOR MARKET IN LIECHTENSTEIN<sup>1</sup>

Liechtenstein's labor market is characterized by a high reliance on non-resident workers, with commuters comprising the greater share of employment, particularly in higher-skilled occupations. With the steady inflow of skilled labor, infrastructure constraints have come into play and productivity has stagnated over time. Furthermore, a sizeable gender pay gap exists and the labor force participation of women and older workers remains relatively low.

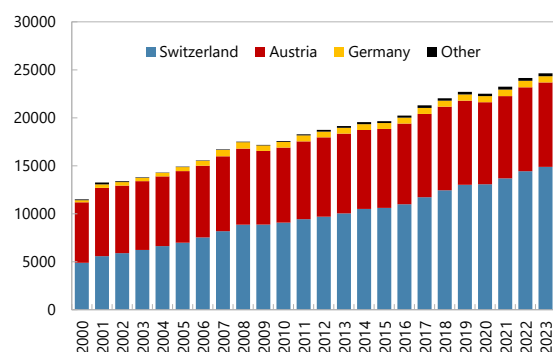
## A. Labor Market Characteristics: Cross-border Commuters and Foreign Nationals

**1. Liechtenstein's labor market is influenced by commuters.** Liechtenstein is an export-oriented economy, specializing in engineering and financial services. Businesses rely strongly on non-resident workers, who outnumber residents (Figure 1b). This has been enabled by a well-connected regional transportation system. The growth in commuters has led to employment exceeding population (Figure 1a), and the job market becoming more comprised of foreign nationals (Figure 2). The vast majority of commuters travel from Switzerland and Austria, and the share of Swiss commuters has increased over time (Figures 1c, d). In recent years, eight out of ten vacancies have been filled by non-resident workers.

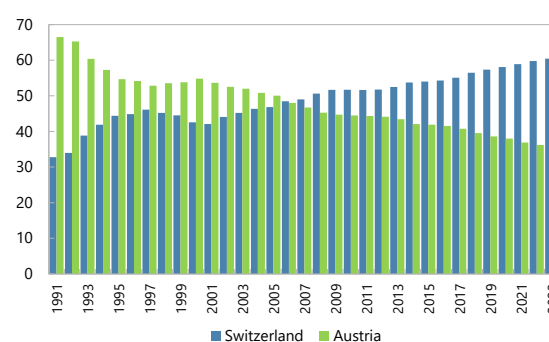
**Figure 1. Integration of Commuters in the Labor Market**



<sup>1</sup> Prepared by Tara Iyer (EUR).

**Figure 1. Integration of Commuters in the Labor Market (Concluded)****Composition of Commuters to Liechtenstein**  
(Person)

Source: Liechtenstein Authorities.

**Share of Overall Commuters**  
(Percent)

Source: Liechtenstein Authorities.

## B. Skills Mismatch and the Distribution of Wages

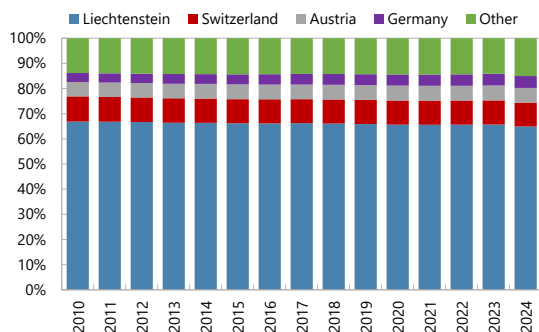
**2. Commuters are more likely than residents to be employed in higher-skilled occupations** (Figure 3). For example, in the industry sector, 23 percent of commuters are engineers, compared to 13 percent of residents, while 12 percent of commuters are construction workers compared to 29 percent of residents. In the services sector, 21 percent of non-resident workers worked in financial services compared to 12 percent of residents.<sup>2</sup>

**3. The need for skilled workers has led to a wage premium for commuters (Figures 3c, 3d), and implementation of labor policy measures to upskill residents.** A number of labor policy measures have been enacted to foster the development of skilled resident workers including promoting vocational training, strengthening dual training, promoting digital skills, and partnering with educational institutions to integrate digital content into training programs.

<sup>2</sup> The categorization by level of skills is indicative. An alternate method accounting for each subsector's share relative to the total resident and commuter workforce also yields similar qualitative results.

**Figure 2. Nationality of Workers in the Labor Market**
**Population by Nationality**

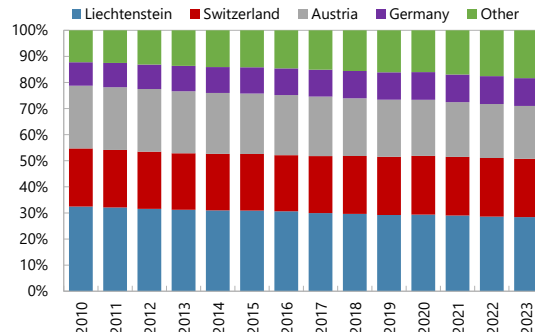
(Percent)



Source: Liechtenstein Office of Statistics.

**Employment by Nationality**

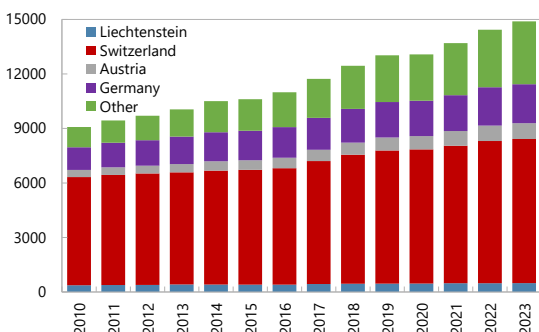
(Percent)



Source: Liechtenstein Office of Statistics.

**Nationality of Commuters From Switzerland**

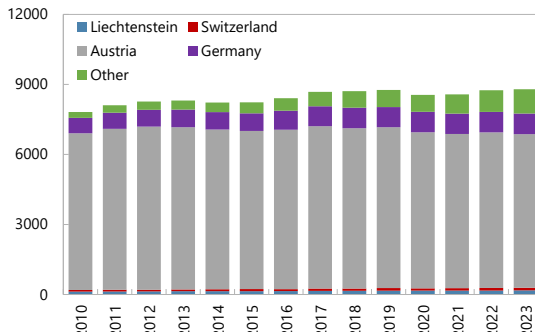
(Person)



Source: Liechtenstein Office of Statistics.

**Nationality of Commuters From Austria**

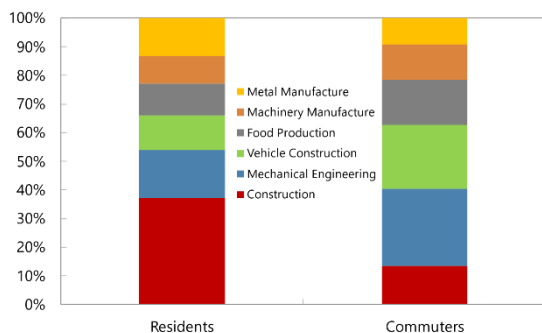
(Person)



Source: Liechtenstein Office of Statistics.

**Figure 3. Employment and Wage Distribution by Resident Status**
**Industry Employment (Top 6 Sectors)**

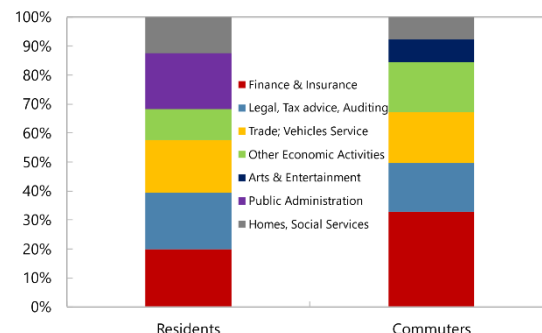
(Percentage point contributions)



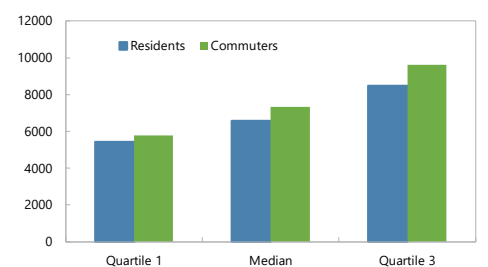
Source: Liechtenstein Authorities.

**Services Employment (Top 6 Sectors)**

(Percentage point contributions)

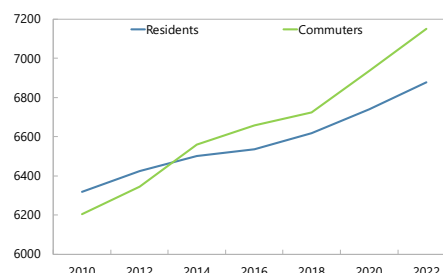


Source: Liechtenstein Authorities.

**Figure 3. Employment and Wage Distribution by Resident Status (Concluded)****Wage Distribution by Resident Status: Industry (CHF)**

Source: Liechtenstein Office of Statistics.

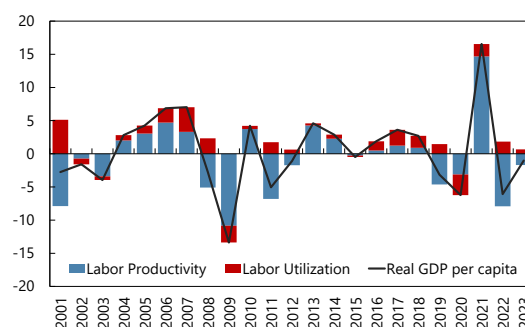
Note: For services, there is a slight wage premium for residents in the lower quartile and the median, and a slight wage premium for commuters in the upper quartile.

**Evolution of Wages by Resident Status (Median Wages, CHF)**

Source: Liechtenstein Office of Statistics.

## C. Infrastructure Constraints and Productivity

**4. To promote productivity and growth, the enhancement of skills and infrastructure is important.** Productivity has not grown despite the inflow of high-skilled labor. Without the skilled imported labor into Liechtenstein, productivity growth is likely to have been even lower. This underscores the importance of continuing to invest in skills training and productivity-enhancing infrastructure.<sup>3</sup> High traffic and congestion during peak commuting hours has become a much-discussed topic (Mobility Concept Report, 2030).

**Figure 4. Real GDP per Capita Decomposition****Contribution of Labor Productivity and Utilization**  
(Percent year-on-year and contributions in percentage points)

Source: Liechtenstein Authorities and IMF staff calculations.

<sup>3</sup> An extensive academic literature documents a significant, positive impact on productivity and economic outcomes of (i) skills (eg. Mankiw, Romer, and Weil, 1992; Card, 1999; Katz and Autor, 1999; Acemoglu and Autor, 2011; Heckman, Stixrud, and Urzua, 2006); and (ii) infrastructure investments (eg. Aschauer, 1989; Munnell, 1992; Fernald, 1999; Calderón and Servén, 2017; Duranton and Turner, 2018).



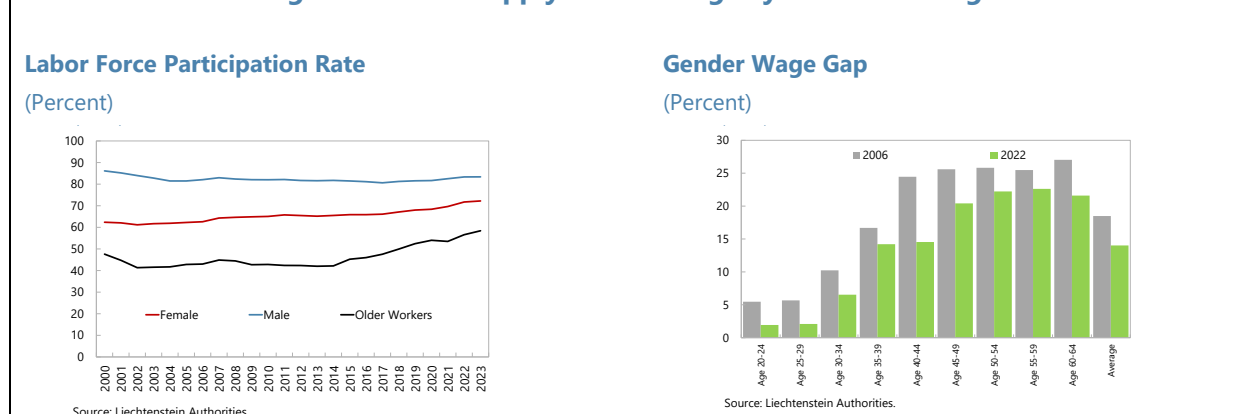
## D. Increasing Labor Supply

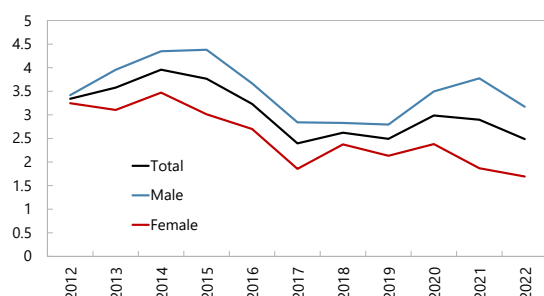
**5. Aggregate labor supply has increased over time, even as the labor market has become tighter.** The labor force participation rate of residents increased to 77.8 percent in 2023 from under 74 percent a decade ago. Over the same time period, the labor market has become tighter as the unemployment rate declined. The unemployment rate is now lower than the EU average and other comparator countries.

**6. The labor supply of women and older workers remains relatively low (Figure 5).** The labor force participation rate of women has increased over the past two decades but, at 72.2 percent in 2023, remains more than 10 percentage points below that of men. Notably, the unemployment rate of women is lower than that of men, having declined by more over the past decade and a half (Figure 5c), possibly reflecting that women are more likely than men to leave the labor force if they cannot find a suitable job, and as one salary may be enough in some households given the income distribution. The participation rate of older workers is even lower than that of women at 56.6 percent in 2023. Improving the labor supply of women and older workers can yield significant economic benefits (e.g. IMF, 2013, 2020). Retaining older workers may alleviate labor shortages and leverage experience.

**7. A sizeable gender wage gap exists that increases with age and leads to lower lifetime earnings for women.** The gender wage gap averages around 14 percent, higher than the EU average. This gap has decreased across the age distribution since 2006 but remains significant (Figure 5b). The gap rises with age, and averages above 21 percent for female workers above age 45. The taxable income of women tends to drop with age, while it keeps rising until age 60 for men (Figure 5d). The gender gap in the labor market exists despite a narrowing of the gap in tertiary educational enrollment. For tertiary school, the percent of males enrolled declined from 58 percent in 2015 to 50 percent in 2022, while it increased from 42 percent to 50 percent for females. The Gender Equality Act seeks to ensure workplace equality between women and men and to guarantee equal access to goods and services. It prohibits discrimination based on gender, marital or family status, and pregnancy or maternity in employment relationships, whether in private or public law.

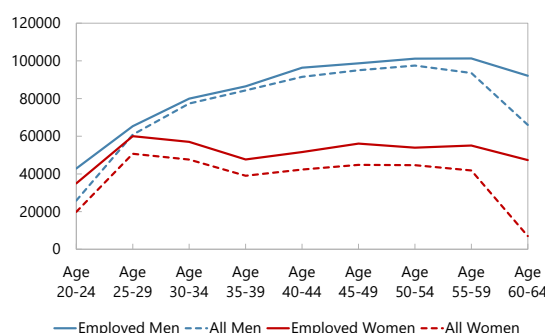
**Figure 5. Labor Supply and Earnings by Gender and Age**



**Figure 5. Labor Supply and Earnings by Gender and Age (Concluded)****Unemployment Rate  
(Percent)**

Source: Liechtenstein Authorities.

Note: The unemployment rate in the chart follows ILO's definition which includes both registered and unregistered unemployment.

**Taxable Income by Gender and Age  
(CHF)**

Source: Liechtenstein Office of Statistics.

**E. Conclusion**

**8. Skill shortages across industry and services characterize the labor market despite growth in commuters.** The government has aimed to expand educational offerings, offer career counseling for employees, recognize qualifications, increase the attractiveness of jobs in shortage occupations such as STEM, and promote and establish lifelong learning. Measures to upskill residents that have been implemented are: (i) state-supported vocational training in new technologies and industry-specific skills; (ii) a dual-training system linked to the private sector that includes courses in fintech and automated manufacturing; (iii) a digital skills transformation program aimed to boost IT skills in finance and engineering; and (iv) programs that promote retraining for workers from other sectors into finance and engineering. Infrastructure development, including in cross-border transport, could reduce congestion and travel time for high-skilled commuters, leading to higher aggregate productivity. Further planned measures to upskill residents include:

- Centers to support R&D, fostering collaboration between business and education to prepare skilled workers for future technologies.
- Further education for mechanical engineers on energy-efficient machines and in the financial sector for sustainable investments.
- Training programs to enhance skillsets of older workers for new technological roles.
- Collaboration with the EU and Switzerland in education and research to attract highly qualified specialists to Liechtenstein.
- Further training in fintech, blockchain, cryptocurrencies, and automated advisory services.

- Further training in automation, robotics, and additive manufacturing processes.

**9. Measures to address gender pay disparities and the lower labor supply of women and older workers would improve macroeconomic outcomes.** The lifetime earnings of women are well below that of men in Liechtenstein. Moreover, the labor force participation rate of women and older workers is still relatively low. Empirical evidence indicates that retaining women and older workers in the labor force can boost growth and lead to improved labor market outcomes. The authorities have recognized these issues in a 2024 report “Measures to Increase Workforce Potential and Labor Force Participation.” Specific actions include offering flexible work options, extending parental leave for men, creating part-time positions aligned with qualifications, and supporting childcare facilities and expanding childcare options within schools. Other measures might include greater public investment in childcare facilities, and enhanced job re-training and integration programs for new mothers returning to the labor force. To promote the labor supply of older workers, planned measures include an extension of the retirement age, flexibility in work schedules, offering pre-retirement career counselling, encouraging longer employment within the public administration, and improving work environments for extended employment in later years.

## References

Acemoglu, Daron, and David H. Autor. 2011. "Skills, Tasks and Technologies: Implications for Employment and Earnings." In *Handbook of Labor Economics*.

Aschauer, David A. 1989. "Is Public Expenditure Productive?" *Journal of Monetary Economics* 23 (2): 177-200.

Card, David. 1999. "The Causal Effect of Education on Earnings." In *Handbook of Labor Economics*, edited by Orley Ashenfelter and David Card, Vol. 3, 1801-1863. Elsevier.

Calderón, César, and Luis Servén. 2017. "The Impact of Infrastructure on Economic Growth in Latin America." *World Bank Policy Research Working Paper*.

Duranton, Gilles, and Matthew A. Turner. 2018. "Urban Growth and Transport Infrastructure." *Review of Economic Studies* 85 (3): 12-43.

Fernald, John G. 1999. "Roads to Prosperity? Assessing the Link Between Public Capital and Productivity." *American Economic Review* 89 (3): 619-638.

Heckman, James J., Jeffrey Stixrud, and Sergio Urzua. 2006. "The Effects of Cognitive and Noncognitive Abilities on Labor Market Outcomes and Social Behavior." *Journal of Labor Economics* 24 (3): 411-482.

International Monetary Fund (IMF). 2013. "Women, Work, and the Economy: Macroeconomic Gains from Gender Equity." *IMF Staff Discussion Note*.

———. 2020. "Macroeconomics of Aging and Policy Implications." *IMF Group of Twenty Discussion Note*.

Katz, Lawrence F., and David H. Autor. 1999. "Changes in the Wage Structure and Earnings Inequality." In *Handbook of Labor Economics*, edited by Orley Ashenfelter and David Card, Vol. 3, 1463-1555. Elsevier.

Mankiw, N. Gregory, David Romer, and David N. Weil. 1992. "A Contribution to the Empirics of Economic Growth." *Quarterly Journal of Economics* 107 (2): 407-437.

Mobility Concept Report. 2024. "Mobility Concept 2030 Principality of Liechtenstein." *Government of Liechtenstein Monitoring Note*.

Munnell, Alicia H. 1992. "Policy Watch: Infrastructure Investment and Economic Growth." *Journal of Economic Perspectives* 6 (4): 189-198.