Human Capital and Regional Business Cycles in Italy

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Abstract

The decision to invest in non compulsory education involves the interaction of two main economic factors, both of which may exhibit significant variability over business cycle: the expected rate of return on human capital investments and the ability to finance schooling. The expected return on education depends, among other things, on opportunity cost (forgone income) and the ability to pay.¹ Both of these factors move in a procyclical manner. Income foregone due to the pursuit of education is lower during

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¹Other important factors are direct education costs (tuition, fees), expectations about future professional employment and future income, liquidity constraints.
recessions. On the other hand the ability to purchase education may be pro-
cyclical in presence of financial market imperfections. Liquidity constraints
might prevent individuals to undertake the desired amount of education.

More recent studies confirm the finding that the decision to invest in edu-
cation is countercyclical. Sakellaris and Spilimbergo (2000) found that OECD
countries enrollment is countercyclical due to the dominant role opportunity
cost plays during economic fluctuations; whereas non-OECD countries show
a pro-cyclical behavior of education enrollment dependent on ability to pay
and credit constraints.2 Dellas and Koubi (2003) point out the major role
that the opportunity cost plays in schooling decisions.

Our paper aims at adding evidence to this ongoing debate by analyzing
annual time series data for Italy in the period 1960 to 2000.3 Looking at the
relationship between the regional secondary and tertiary school enrolment
rates data and regional real GDP fluctuations, we want to shed some light
on this issue. The method of choice is a 2-variable VAR approach for school
enrolment rate and business fluctuations measured as deviations of regional
GDP from a trend. As in Mastromarco and Woitek (2007), we calculate the
spectral representation of a VAR model with time varying parameters. This
allows us to look at correlation and phase shift between the variables in the
system frequency-by-frequency and to study the stability of the relationship
over time.

**JEL Codes:** C32, E32, I2

**key words:** Italian regional business cycles, human capital,
stylized facts, comovement.

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2This results confirm that labor-market institutions, educational institutions and poli-
cies and credit constraints are important factors to explain the cyclical properties of in-
vestment in human capital.

3Data source: School enrolment rates: ISTAT, Annuario Statistico dell’Istruzione Ital-
iana, different years; GDP: CRENOS www.crenos.it.
References

