

COST-BENEFIT ANALYSIS OF PARALLEL EDUCATION STREAMS IN THE PUBLIC SECTOR

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INTRODUCTION OF THE STUDY

Public education provision plays a key role in the social, cultural, political, and economic development of a nation.

However, the provision of effective public education is one of the most challenging tasks in the public good provision domain. Since 1947, more than twenty-three education policies and five-year plans have been presented in Pakistan. But, our education system is still facing with issues such as ineffective management and supervision protocols, poor examination systems etc. In this study, we focus on three challenging aspects of effective public education provision:

1. Analyzing the Costs and Benefits of competing investment programs in the public sector. A Comparison of Cadet Colleges (CCs) and Islamabad Model Colleges (IMCs)
2. "Getting things done" since adopting

ambitious goals is not enough

3. Policy learning and system strengthening since there is always a need for improvement

**Parallel
Education
Streams
in the
Public
Sector**

Cadet Colleges

This category includes
institute managed by
board of Governors

Funded by the Civil
Governments

Also charge a
considerable fee and
enjoy a high degree
of autonomy

Islamabad Model Colleges

Islamabad Model Colleges
are managed by the
Federal
Directorate of Education

Funded by the
Civil Government

**Research
Objective
s**

To study the current method of funding in publicly funded
schools.

To do a Cost-Benefit Analysis (CBA) of Cadet Colleges (CCs)
and Islamabad Model Colleges (IMCs).

To study the education delivery system of both CCs and IMCs for lesson learn and system strengthening. The delivery approach refers to focusing on implementation and “getting things done”.

A Mixed Method Research

CBA

Here, we have conducted a comparative cost-benefit analysis of the CCs and IMCs to assess the cost associated with each stream and the benefits they provide to the public.

Pooled Regression Analysis

Here, we examined the comparative status of both streams in producing cognitive skills (test scores).

Evaluation of Delivery Approach (DA)

Here, we assessed how each stream set its goals and priorities, and how they are followed by processes such as measurement and monitoring, accountability and incentivization, problem-solving, and management routines to get things done. The evaluation of (DA) helps us to do a juxtaposition to know how things are done in each stream, and which stream is doing better. The findings of this evaluation is useful for policy learning and system strengthening.

The Three Scaling Pans of Cost-Benefit Analysis

The Net Present Value (NPV)

$$NPV = \sum_{t=0}^n \text{Benefits} - \text{Costs} \div (1 + r)^n$$

Economic Rate of Return (ERR)

$$NPV = 0 = \sum_{t=0}^n \text{Benefits} - \text{Costs} \div (1 + r)^n = ERR$$

Benefit-Cost Ratio (BCR)

$$BCR = (PV \text{ of benefits}) \div (PV \text{ of costs})$$

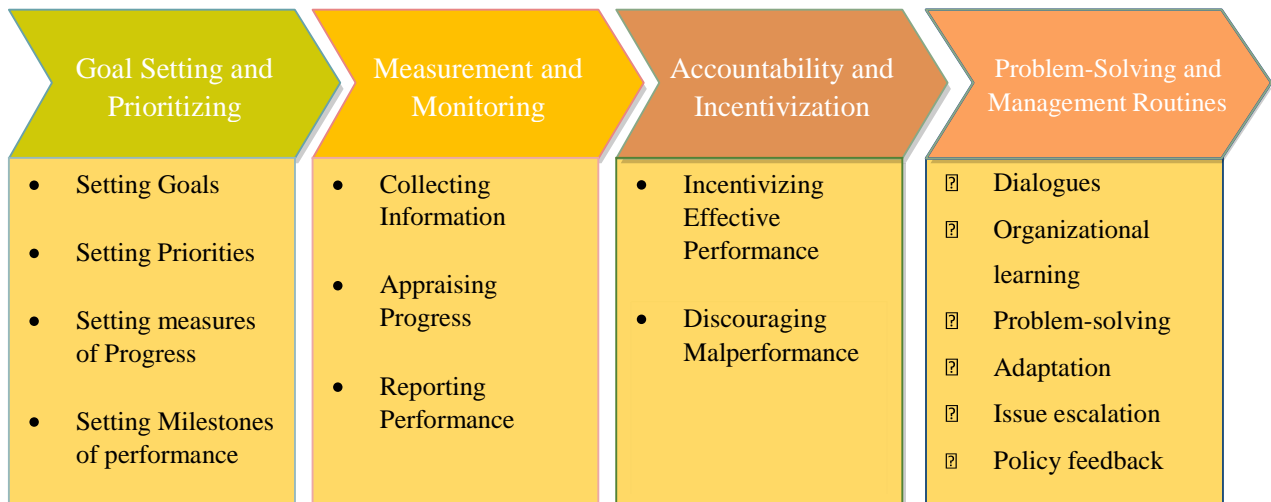
Pooled Regression Model

$$Y = b_0 + b_1X_1 + b_2X_2 + e$$

Where Y = Institutions' GPA, X₁ = School Type, and X₂ = vector of other control variables

The Delivery Approach and its Functional Mechanism

In this study “the delivery approach” refers to the existing mechanisms which are adapted to convert or implement key educational policy objectives into practice. There are four basic principle processes of the delivery system such as (a) *Goal setting and prioritizing* (b) *Measurement and Monitoring* (c) *Accountability and Incentivization* (d) *Problem-solving and Management Routines*.

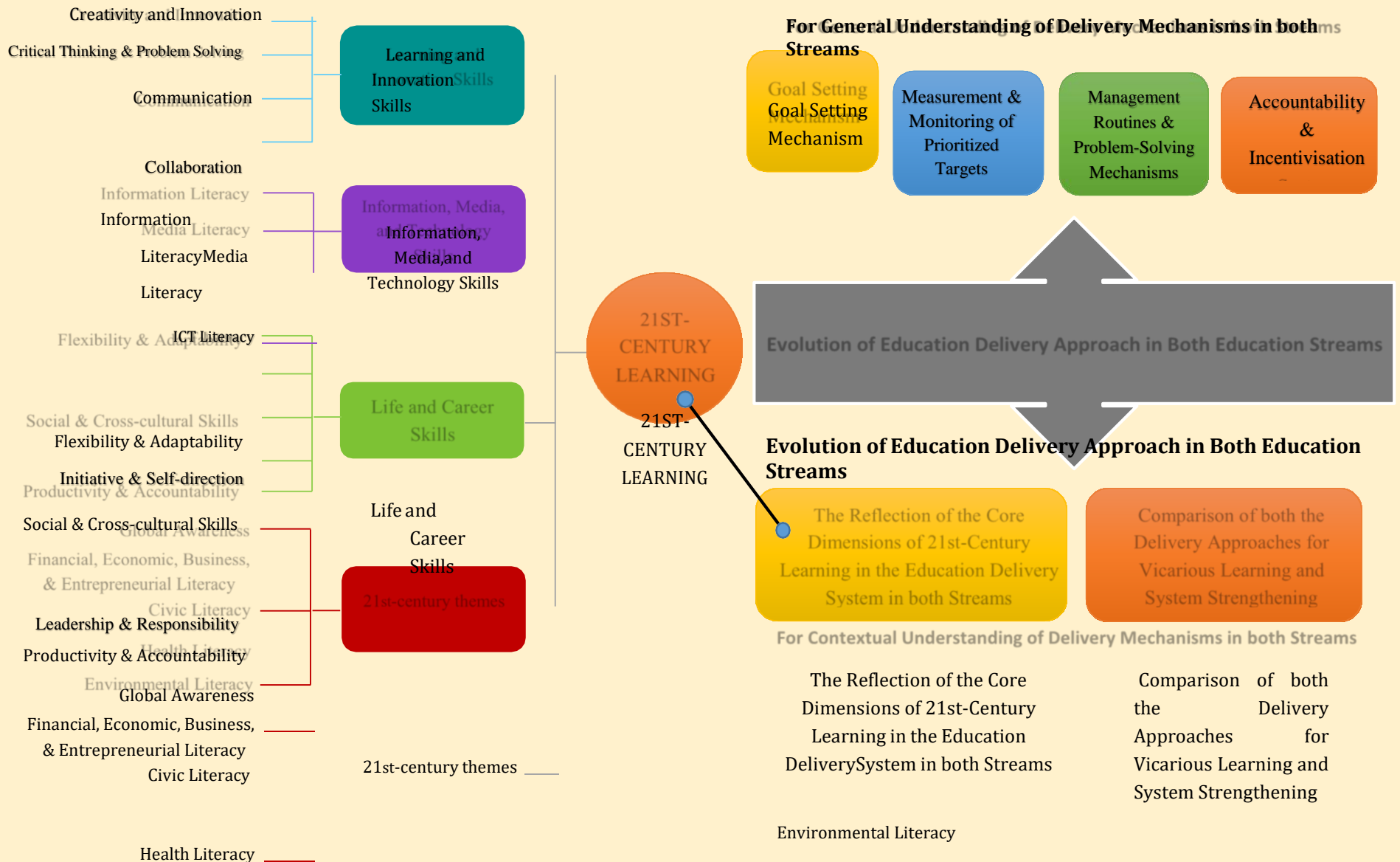


Linking Education Delivery with 21ST Century Learning

In this study we have taken support from the literature of deliverology that focus on getting things done and from the P21 Framework which has been developed by the grand partnership of academia and business leaders to define and illustrate the skills/knowledge for modern learners that are required to navigate effectively in 21st-century. In fact, we are intended to evaluate delivery approaches of both education streams to understand the general working mechanism of getting things done in both education systems and its relevance to the P21 Framework.









The main essence to which we refer here is that the more robust an education delivery system is the more improved are the core competencies of the children.

CONCEPTUAL FRAMEWORK: LINKING EDUCATION DELIVERY WITH 21ST CENTURY LEARNING

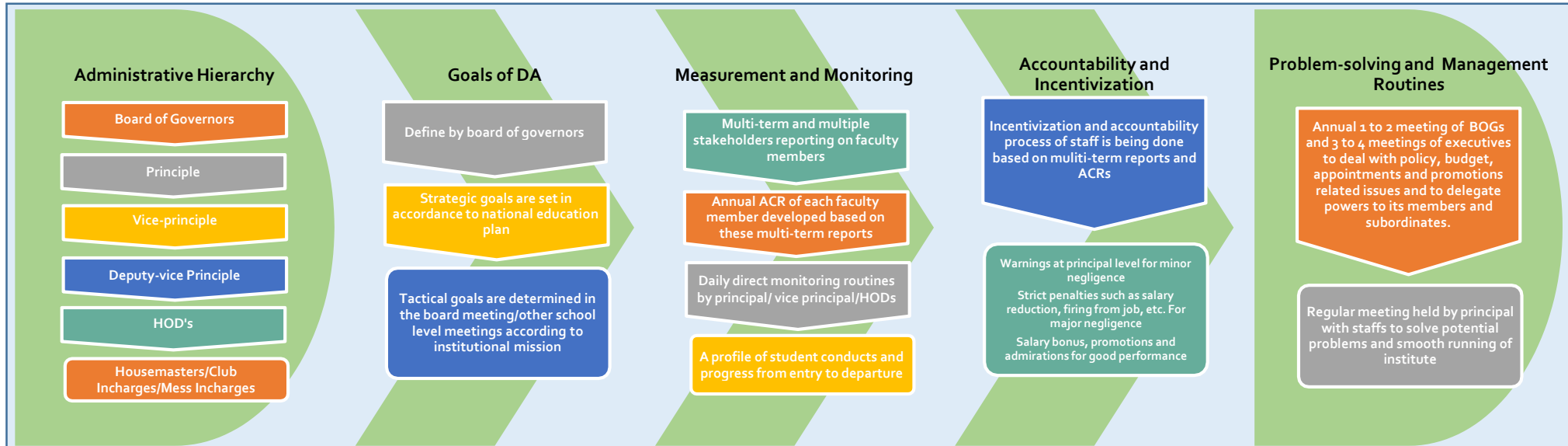


**For Contextual
Understanding of
Delivery Mechanisms in
both Streams**

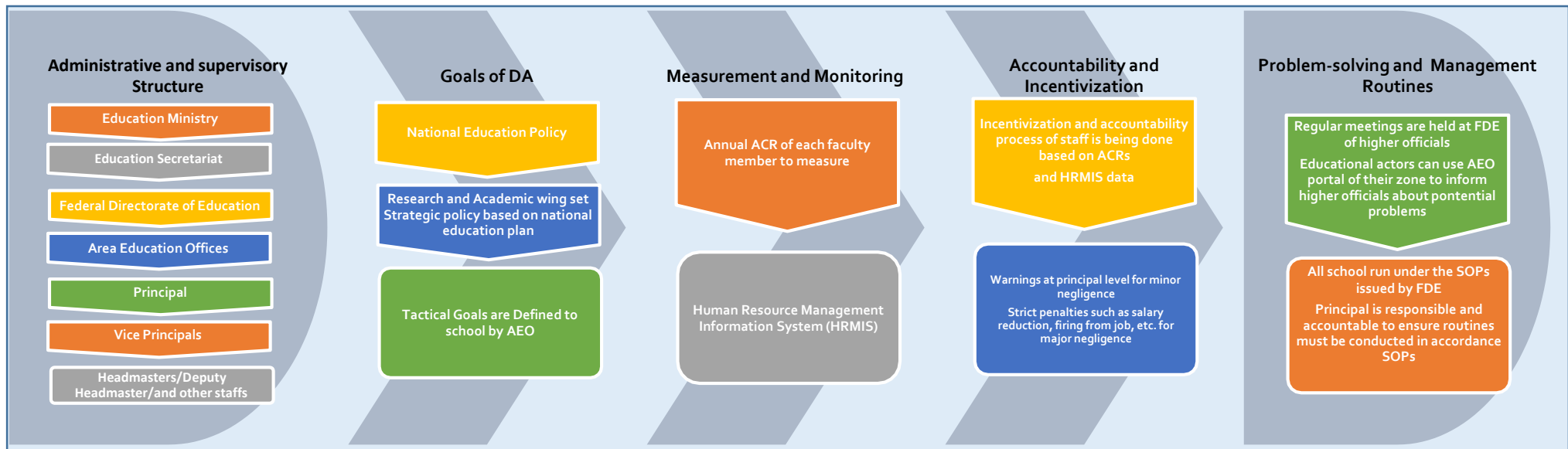
CBA AND POOLED REGRESSION: COMPARATIVE STATUS OF IMCS AND CCS

Islamabad Model Colleges (IMCs)	Cadet Colleges (CCs)
 <p>ANNUAL AVERAGE PER STUDENT COST TO GOVT.</p> <p style="text-align: center;">24924.11</p> <p style="text-align: center;">654.63 > Cadet Colleges</p>	 <p>ANNUAL AVERAGE PER STUDENT COST TO GOVT.</p> <p style="text-align: center;">24269.48</p>
 <p>EXPECTED AVERAGE INCREMENT ON MONTHLY WAGE <i>(DUE TO VALUE ADDITION IN HIGHER SECONDARY SCHOOLING)</i></p> <p style="text-align: center;">2686.57</p>	 <p>EXPECTED AVERAGE INCREMENT ON MONTHLY WAGE <i>(DUE TO VALUE ADDITION IN HIGHER SECONDARY SCHOOLING)</i></p> <p style="text-align: center;">3398.73</p>
 <p>AVERAGE GPA</p> <p style="text-align: center;">1.75 < Cadet Colleges</p>	 <p>AVERAGE GPA</p> <p style="text-align: center;">1.75 > Islamabad Model Colleges</p>
 <p>BENEFIT COST RATIOS</p> <p>BASED ON COST TO GOVT. 3.33</p> <p>BASED ON COST TO GOVT. PLUS PRIVATE COST 3.26</p> <p>BASED ON COST TO GOVT., PRIVATE COST, AND OPP. COST 1.40</p>	 <p>BENEFIT COST RATIOS</p> <p>BASED ON COST TO GOVT. 7.92</p> <p>BASED ON COST TO GOVT. PLUS PRIVATE COST 2.26</p> <p>BASED ON COST TO GOVT., PRIVATE COST, AND OPP. COST 1.27</p>

Delivery Approach of Cadet Colleges

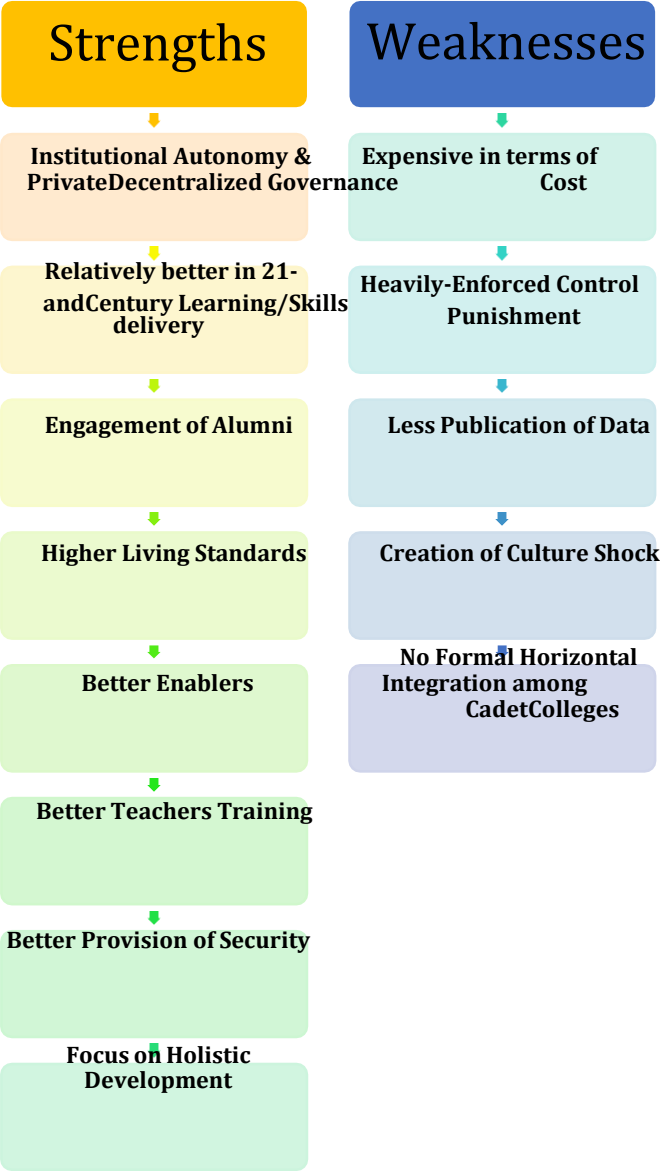


Delivery Approach of Islamabad Model College

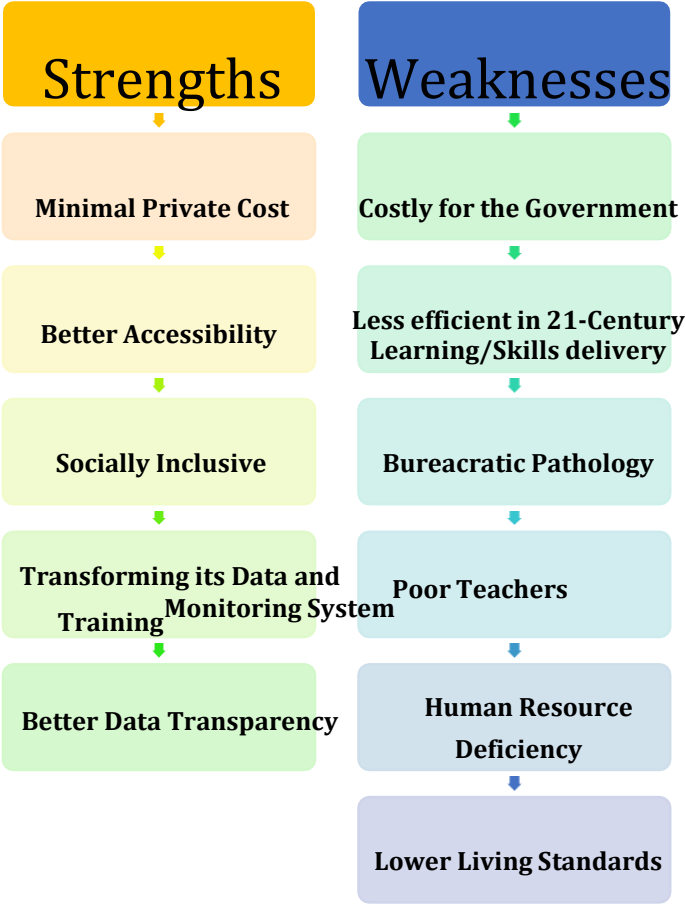




STRENGTHS & WEAKNESSES OF CADET COLLEGES



STRENGTHS & WEAKNESSES OF ISLAMABAD MODEL COLLEGES



Conclusion

In this study, we assessed the IMCs and CCs on three dimensions: in producing earning benefits, in producing better academic grades, and in getting things done. For this purpose, we applied a mixed-method approach to compare both streams of education. This implies that this study has approached the research problem from both quantitative and qualitative dimensions. In the quantitative domain, we covered the Cost-Benefit Analysis (CBA) and Pooled Regression Analysis (PRA).

Whereas in the qualitative domain, we focused on comparing the delivery approach of both school systems.

The cost-benefit analysis has shown that investment in both streams is beneficial for the economy in the long run.

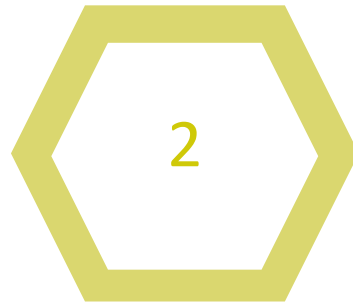
However, considering the cost to the government only, the CCs are producing more benefits than IMCs, while considering the overall cost (including cost to the government, private cost, and opportunity cost) IMCs are slightly ahead of CCs not because of higher-earnings but because of lower private costs. The Pooled regression analysis showed that CCs are producing higher academic grades than IMCs. In addition, we found that the delivery approach of CCs is relatively better than the delivery approach of IMCs.

Recommendations of the Research



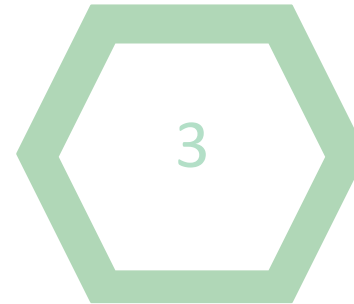
Both education streams are cost-effective, so a genuine demand for scaling up or for launching new projects from either stream can be responded to positively.

This research has witnessed complaints about the shortage of human resources in the IMCs. Therefore, such demands should be appraised critically and the shortages if any should be filled as soon as possible for system strengthening.



The transparency in education related data should be increased in all streams so as to allow:

- Research organizations and independent researchers to conduct their research. This will enhance scholarly/intellectual inputs into education policymaking.
- It will enhance the effectiveness of the evaluation of programs, resources, and interventions.
- It will increase civic involvement in the education delivery system.



New initiatives and interventions are important for improving education outcomes but without competent and skillful teachers such intervention and initiatives may not produce desirable outcomes. Therefore, we should bring back professionalism to the teaching profession.

