Title	Higher Education Reforms and Its Organizational Implications on Universities in Myanmar
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Abstract

Apparent inefficiency in education system and resulted low quality education in Myanmar force the Government of Myanmar to take necessary steps to change the education system in 2014 with launching National Education Law (NEL). The NEL is becoming a launch-pad on which higher education reforms lift off.

This paper portrays the general picture of higher education reforms in Myanmar and highlights organizational implications on universities. Organizational immplications mainly concern with university governance, structural change in higher education system, collision between old structure and new culture and internal mechanism for control. This paper also explores the possible dimensions of universities that will go and possible courses of actions that the universities will take. At last, this paper pinpoints that the reforms without the well-planned organizational arrangements will lead the way for lower quality education or the derailment from reform tracks in the foreseeable future.

Key words: Reforms, Organizational Implications, Organizational Arrangements

Introduction

Myanmar experienced isolation from the world community under the name of socialism and military rule for almost five decades. Myanmar's endeavor to rejoin to the rest of the world in 2010 along with the smooth transition from military rule to democratically elected civilian government.

During the first two years of civilian government, series of reforms were initiated, among them; political reform was the main focus. The focus of reform later shifts to economic and social sector called second wave of reform. In economic and social reforms, one of the critical concerns is higher education. Although the higher education reforms began in the middle of 2013, the kick-out only launched very recently with the emerging of National Education Law (NEL). The NEL, the first of its kind in Myanmar, is becoming the launch-pad for the higher educational reforms.

This paper tries to portray the picture of changes in the higher

education system and its organizational implications on state-owned universities; university governance, possible internal collision between old structure and new culture, and possible dimensions of universities.

Higher Education System an University Organization at Present

The higher education in the existing system is directly responsible to and managed by the Ministry of Education (MOE). The policy maker or the highest in its administrative hierarchy concerning with education is National Education Commission (NEC) chaired by Minister of Education, and the members consist of Deputy Ministers from other Ministries who are running universities and colleges. NEC is, as shown in Figure (1), supported by two councils, namely Central Universities Council and Universities Academic Board Council.

Figure (1). The Organization Structure of Higher Education

Universities are tightly controlled by the respective Ministries through their departments. Control is the main purpose of the design of education system and university organization. The main reasons historically rooted in the socialist and military rule era. The primary assumption of those governments about the universities was that the university is a birthplace of communist and start-point of any political unrest. Thus tight control on the universities is essentially important for the political stability at any time for the government.

The result is very steep organization structure with many layers and large power distance between Ministry, Department and university. University is running with the instructions and orders from higher levels in the hierarchy. The university nominally has, in some extent, freedom in academic affairs but in real practice, there are still many restrictions. The university is, therefore, part of the government administrative apparatus managed by the orders in order to implement what the government wants. Hence, the university lost its fundamental core value of freedom, creativity and innovation. The resulted outcome is unavoidably lower quality education.

No private university or college is allowed in higher education sector; only state-owned organizations exist. The higher education sector is, therefore, monopolized by the government and here again, lacks competition which is extremely important for quality education at any sense.

Universities are also categorized into three: Professional University, Arts and Science University (including University of Distance Education) and specialized University. University entrance is determined only by the Matriculation Examination marks except Specialized Universities for which they have their own entrance examination system, for example, Defense Service Academy. The one who got the higher marks from Matriculation Examination has the right to enter Professional Universities such as University of Medicine, University of Technology, University of Economics and etc. The remaining has to go to Arts and Science Universities with the exceptions of those who choose intentionally the university they want despite of their higher marks. Those Universities are named with the name of nearest city, for example, Meiktila University. Professional an Arts and Science Universities entrance systems are area restricted system that is the student from specific area can enter only predetermined university. The student has no choice.

Higher Education Reforms

The apparent inefficiency of existing higher education system, the government launched higher education reforms intensively in 2014, intended to give university more freedom in academic, administrative as well as financial affairs.

The reform includes mainly redesigning higher education system and restructuring state-owned universities. The universities are effectively separated from the administration of respective Ministries with the exception of those universities which have been given special attentions due to their nature, such as universities under the Ministry of Defense, Religion and Civil Servant Board. The submission process of budget requirements to the union government on behalf of universities is only the remaining task for the Ministry of Education. For the compilation of budget estimates from the universities, and for the coordination and cooperation between universities, Higher Education Coordination Committee has to be set up under NEC (Figure 2).

Figure (2). The organization Structure of Higher Education (after reform)

The university has virtually complete control over their operations with the little exception of financial affairs where the universities still require substantial amount of fund in terms of capital and current expenditure from the government (semi-autonomous universities). The university entrance system will also be changed to university specific system; the university has the right to hold its own entrance examination with its own predetermined system. The mandate is given to the Ministry of Education to complete its transformation from government controlled university into autonomous one within five years.

Organizational Implication on University Organizations

The reforms will have a large impact on the university organizations; mainly structure, system, procedure and process, and culture.

In this paper, however, only the university governance structure, collision between reforms and structure and possible dimensions of university organizations are explored.

University Governance Structure

The governance structure in existing universities is quite clear and direct. The university is just a part in the whole government body controlled by higher level offices in hierarchies, operated by the orders from above, audited by auditors from government organization, and so on. Therefore, the Rector, the head of university is indeed only responsible for the operations assigned to him rather than the management of whole organization.

After reforms, the government will cut the control of university operations and make it more autonomous. The absence of this governance structure along with the following external factors inevitably demands urgent and very strong internal governance structure in university organizations. The external factors are:

(a) inefficient or inadequate external labor market that is lack of or malfunctioned CEO labor market in which information about the participants is rarely available and

(b) lack of reliable ranking system or accreditation system

Both are very crucial mechanisms for governance structure which can discipline managers (Rectors) to do their job more efficiently and effectively in order to achieve the organizational goals. The only available external factor is registered external audit (External Audit Firms). It is, at any sense, extremely weak in external mechanisms and more and more depends on internal mechanisms; university council structure, decision structure and independent internal audit.

The internal mechanism is becoming very important for the university to keep the Rectors doing the right things for the university rather than for their private consumptions. the underlying idea is making the internal mechanism strong enough to control the Rector to do the right things for the university but at the same time not to be so strong to hinder the effective and efficient operations. It is balancing process between the control and operations.

The university council must be deliberately structured in which the

influence of Rectors can be greatly reduced but not eliminated because of blancing process. The internal audit has to be completely separated from the influence of Rector and directly accountable to the university council rather than it is set up under any departments on which the Rector can any way exercise his or her influence. Thus internal audit will be independent from the internal management mechanism. The decisions must also be thoroughly examined and distributed between the rector and the Council while taking into account of balancing process. The whole internal control mechanism which includes council structure, internal audit and decision structure is essentially necessary for the university for at least its survival and for at best its success.

Collision between Old Structure and New Culture

New culture of freedom and liberalization will collide with the old structure of hierarchy with large power gap between offices and positions supported by the command-obedience culture. The problems seem to be very simple but in practice it is a hard- to- solve- problem as all staff is still government employee and they have to be managed due to civil servants regulations to which the Rector actually has many restrictions to exercise his power upon them.

This collision certainly reduces the efficiency of management and greatly affects the operations. If the operation goes badly, there will be no good or rational reasons to blame the Rectors especially while the Rector has no complete control power upon his employees. For worst scenario it will be a strong incentive for the Rector to use the property of organization for the private consumption (called misuse or corruption) as he does not need to bear the responsibilities for the bad results.

Dimensions of University Organizations

The reform creates a path to which the university has to naturally follow. The reason behind is that many universities were established due to the political reasons rather than that of economic or business feasibility. Among them, many not a few are definitely sure that they cannot survive unless the full government financial support. If there are failed universities, they can be hard to be dissolved because the regional government and ethnic groups in the regions will oppose any dissolution. The main reasons

for opposition to the dissolution of university are that the university can create employment and support regional development as well as the pride of university existence in their regions. The closure of any university in their regions will trigger political resentment of residence in the regions; political risk. The universities have to survive at any expense or at least for the short time.

Very a few universities especially situated in the big city, mainly Yangon and Mandalay cities, have greater chances to be an autonomous university within the given timeframe. Other universities, especially situated in the remote areas have less opportunity to develop and survive. They cannot stand alone. They have to be inevitably consolidated into a bigger and comprehensive regional university or run regional government sponsored or Union Government sponsored universities. The universities are, in this ways, going into two types; the stand alone university and regional university. Both of them will try to be a comprehensive university in order to get market share regardless of quality and adequate resources because they are limited to confer only the predetermined Degrees in the existing system. The poor quality education will, therefore, continue to be observed in the foresseable future, unless there are strong and enforceable regulations on the universities. Regulations on the rapid expansion are in some extents necessary to prevent the money-seeking behavior.

The main idea is that the deregulation of higher education must be a controllable way with a predetermined quality assurance system. The new system of higher education, of course, consists of national level quality assurance n accreditation systems, but these systems are also its primitive stage and full-fledge operation takes times. For the short time, the strict regulations on the expansion of university are also necessary to prevent the slow quality development or poor quality education.

Conclusion

Higher education reforms are extensively launched in 2014 in order to get higher quality education by giving more autonomy to the university. The autonomy alone cannot necessarily grantee higher quality education but the organizational factors are also very important to be a successful organization or at least for the smooth operations. For the worst scenario, autonomy may create a strong incentive to expropriate university property

for private consumption by the Rector. Without consideration of organizational factors, the reform will faces high possibility of derailment from the course of reform. It may also encourage the universities to be quantity producing institutions.

Good governance structure, deliberate decision structure and independent internal audit can altogether build a mechanism which can greatly reduce the opportunistic behavior of Rectors, especially in the situations where the external mechanism for university government is extremely weak. Strong organizational arrangements are, therefore, essentially important for the attainment of organizational goal, quality education. The organizational arrangements have to be in place before or while any reform programs actually launch.

Materials and Methods

Study Period

The ecological studies were conducted from February 2004 to December, 2004 and from June 2006 to July 2007 in the Dokhtawady River and its connected rivers and streams.

Study Area

The Dokhtawady River is one of the tributaries of the Ayeyawady River. This river begins by the confluent of Namtu and Natma Rivers from northern Shan State. It is approximately 70-100 m wide in broader area but 15-25 m in narrower area with steep sided sandy banks. The water level is seasonally changing, rising in the rainy season to overflow the sand banks and adjacent plants. Water temperature ranged between 17.5°C – 25.5°C in the study period. The bottom of river mainly consists of sand, gravels and rocks in some area. The water is highly turbid and slow in rainy season but clear and swift in dry season. The collected fishes were identified according to Talwar and Jhingram (1991). Some plants occuring in the river bank and stream were classified according to Hundley and Chit Ko Ko (1987) and Kress, DeFilipps, Farr and Yin Yin Kyi (2003).

Results

The Nature of the River Habitats

Namtu River

Namtu River starts from northeast of Namtu township. This river flows through the Namtu township and joins to Natma River Northern part of Hsipaw township to form Dokhtawady River. This river is about 18-27 m wide and 1.5-8 m depth. The flow of river is windering and substrate is mixture of sand and gravel. In the dry season, some shallow areas falls down about 1 m depth. This river is more turbid than Natma River. The water temperature is about 19°C - 25°C (Fig. 1).

Natma River

Natma River flows from northeast of the Hsipaw township. At the northern part of Hsipaw township, the river joins to Namtu River. The river channel consists of long stretches of rapid, interspersed with deep waterholes. The river bed is almost sand, pebbles but long boulders in shallow area. The water is very clear and extremely cold. The width of river is about 9-18 m and 1.5 – 9 m in depth. The water temperature ranges from 18°C to 25°C (Fig.1).

Kyinthi Stream

This stream is located across the Mandalay Muse Highway Road at the southeast of the Hsipaw township. It joins to the Dokhtawady River near Kyinthi Village. The width of stream ranges about 6 – 14 m. The water level changes with season, ranging from 0.5 to 3 m in dry season but 2.5 m – 6m in rainy season. The stream temperature is about 17.5°C – 23°C. The bottom of the stream composed of sand and pebbles (Fig.1).

Ecological Survey

In the present work, the ecological surveys were carried out in the three rivers known as Namtu, Natma, and Dokhtawady and one stream, Kyinthi. These areas are seasonally flooded and water levels varied. During the rainy season, the rivers and streams are flooded and turbid, while rapid and clean during the dry season. In the sand bank of the Dokhtawady River, a few agricultural crops are cultivated during the dry season on the exposed soil. Predominant aquatic vegetations are *Arundo donax* (Kyu), *Saccharum spontaneum* (Kaing), *Ficus glomerata* (Ye-tha-phan), *Ipomoea aquatica* (Ye-ka-zun), *Lumnitzera recemosa* (Yin-ye), and *Eugenia operculata* (Ye-tha-bye). All aquatic vegetation except *Ficus glomerata* (Ye-tha-phan) and *Ipomoea aquatica* (Ye-ka-zun) were found as submergents during the rainy season. The terrestrial plants were found near sand banks or at river sides (Fig.2 and Table 1). In such a river with various ecological zones, has different seasonal changes, inhabited by fish fauna and crustaceans (shrimp, prawn and crab), gastropods, and aquatic insects (Fig.3 and Table 2).

A. Dokhtawady River

B. Namtu River

C. Natma River

D. Kyinthi Stream

Figure 1. Study sites

A. *Hibisus surattensis*

B. *Eugenia operculata*

C. *Duabanga grandiflora*

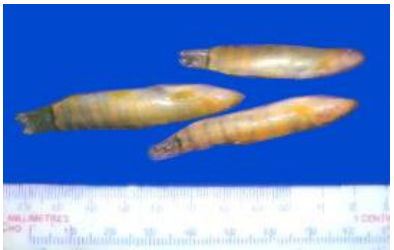
D. *Ficus glomerata*

E. *Lumnitzera racemosa*

F. *Saccharum spontaneum*

Figure 2. Common Plants in the Dokhtawady River banks and Streams

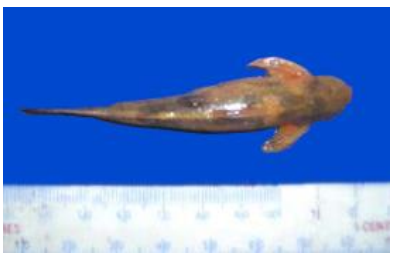
A. *Channa gushua*



B. *Nemachilus multifasciatus*

C. *Nemachilus denisoni*

D. *Lepidocephalus berdmorei*



E. *Glyptothorax cavia*

F. *Danio aequipinnatus*

G. *Puntius sarana*

H. *Macrobranchium* sp.

Figure 3. Common Fishes and Prawn in the Dokhtawady River and Streams

Discussion

Asian Leaf Turtle, *Cyclemys dentata* was commonly found in pools, ponds, low land creeks, small river connected to main river channel. This turtle inhabits shallow and marginal habitat of river and stream. Adults were often found on the terrestrial habitats near river and stream. Juveniles were preferable aquatic habitat when compared to adult.

Kirkpatrick (1996) reported that Asian Leaf Turtles are somewhat terrestrial habit and found basking on land. Jones (1996) found that deadwood basking substrates were important habitat influencing the abundance and distribution of riverine emydid turtles. Aquatic turtles travel on land to lay eggs or move to different water bodies during certain times of the year (Bury, 1979 cited by Harless and Morlock, 1979).

In this study, the substrates of small river and stream were mainly sand, gravels, or mixture of sand and gravels and long boulders. In some areas, deadwoods fall down into the water suitable for basking habit. Particular substrate types may benefit turtles by providing appropriate habitat for growth of favored food plants and animal prey (Moll and Moll, 2004).

Temperature of river and stream differed about 8°C between hot and cold seasons. Water temperature ranged from 17.5° C – 25.5°C. In the study period, stream was more cooler than river and river is approximately 2-4 times wider than stream. Thus it seems that *C*. *dentata* was not competing for habitat with the other turtles at the river and stream. This turtle inhabits shallow streams of mountain, low lands and hill forest (Win Maung and Win Ko Ko, 2002).

The water level was higher in rainy season than hot season. In some areas, the water depth was about 1 m in dry season and hence streams have cooler temperature, large fluctuation in water level, shallow water depth, a rock or gravel bottom, and a narrow channel. On the other hand, river represents warmer temperature, more stable water levels, greater water depth, a silt and sand bottom and a broad channel (Pratt, 1995).

Among the recorded common plants *Arundo donax* (Kyu), *Saccharum spontaneum* (Kaing), *Lumnitzera racemosa* (Yin-Ye), *Eugenia operculata* (Ye-tha-bye), *Ficus glomerata* (Ye-tha-phan), *Ipomoea aquatica* (Ye-ka-zun) were commonly found in all turtle habitats. The vegetation,

Table 1. Recorded common plants in Dokhtawady River banks and streams

Botanical Name	Myanmar name	Tree/ Shrub/ Grass/Herb	Submergent	Emergent
Crateva hygrophila	Ye – kadet	Shrub	–	+
Crateva religiosa	Kon-kadet	Tree	–	+
Flueggea virosa	Ye-chin-ya	Shrub	–	+
Flueggea leucopyrus	Kon-chin-ya	Shrub	–	+
Ficus glomerata	Ye-tha-phan	Tree	–	+
Hibiscus surattensis	Taw-chinbaung	Shrub	–	+
Eugenia operculata	Ye-tha-bye	Tree	+	+
Bridelia retusa	Seik-chi	Tree	–	+
Duabanga grandiflora	Myauk-ngo	Tree	–	+
Salix tetrasperma	Momakha	Tree	–	+
Ipomoea aquatica	Ye-ka-zun	Herb	–	+
Combretum acuminatum	Nabu-nwe	Herb	–	+
Ficus obtusifolia	Nyaung gyat	Tree	–	+
Lumnitzera racemosa	Yin-ye	Shrub	+	+
Saccharum spontaneum	Kaing	Grass	+	+
Arundo donax	Kyu	Grass	+	+

– absent

+ present

Table 2. Recorded common fishes in Dokhtawady River and streams

Order	Family	Subfamily	Scientific Name
Osteoglossiformes	Notopteridae	-	*Notopterus notopterus*
Cypriniformes	Cyprinidae	Cyprininae	*Labeo boga*
/	/	/	*L. calbasu*
/	/	/	*L. pangusia*
/	/	/	*L. rohita*
/	/	/	*Osteobrama belangeri*
/	/	/	*Puntius ticto*
/	/	/	*P. sarana*
/	/	Cultrinae	*Danio aequipinnatus*
/	Balitoridae	Nemachielinae	*Nemacheilus denisoni*
/	/	/	*N. monilis*
/	/	/	*N. multifasciatus*
/	Cobitidae	Cobitinae	*Lepidocephalus berdomorei*
Siluriformes	Bagridae	-	*Mystus vittatus*
/	Sisoridae	-	*Glyptothorax cavia*
Perciformes	Ambassidae	-	*Pseudambasis lala*
/	Belontidae	Trichogasterinae	*Colisa* sp.
	Channidae	-	*Channa gushua*
	Mastacembel -idae	-	*Mastacenbelus armatus*

Ficus glomerata (Ye-than-phan) and *Ipomaea aquatica* (Ye-ka-zun), *Flueggea virosa* (Ye-chin-ya) and *Flueggea leucopyrus* (Kon-chin-ya) were found at the habitat of Myanmar endemic flapshell turtle, *Lissemys scutata* in Lay-pin lake near Dokhtawady River as reported by Kyaw Moe (2005). Fruit of *Ficus glomerata* is the one of the plant diets of this turtle. *Cyclemys dentata* can be captured with the trap constructed near fruiting trees along the river banks as reported by Platt, *et al*., (2000).

Different species of fish inhabit stream and river. Mar Lar (1998) recorded 75 species of fish species in Dokhtawady River. Some species of fish bear peculiar structures adapting to live in a fast flowing river. Some structural adaptation of fish are depressed body, horizontal fan-shaped fins, adhesive pad on chest and possessing of various sucker types. Other invertebrates were freshwater snail, crab, shrimp, prawn, aquatic insects and annelids.

The species *C*. *dentata* inhabits pools, streams and rivers which are not only rich in animal and plant diets but also suitable microhabitats for their life.

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