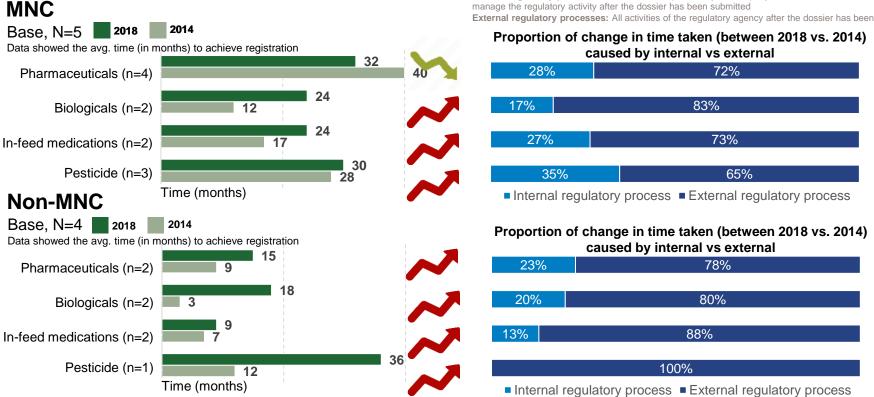


MALAYSIA - COMPANION ANIMALS: Time taken to achieve new animal health product registration (months) In general, the time taken to registered AH products have increased in 2018 vs. 2014, with the exception of pharmaceutical by MNC companies due to external regulatory process Internal regulatory processes: All activities required for your company to

Companion animal



manage the regulatory activity after the dossier has been submitted External regulatory processes: All activities of the regulatory agency after the dossier has been submitted

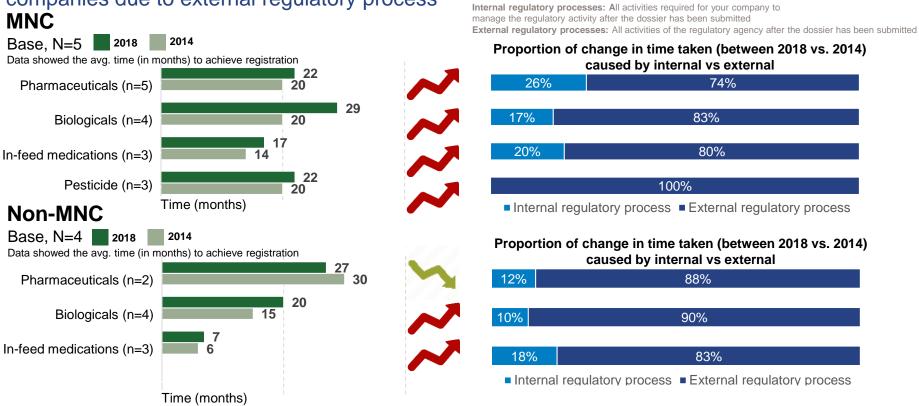


C1a1. Can you tell me what the typical time is for you to achieve registration for AH products for your country/ASEAN currently? C1b. What about vs/ 2014? C1c. What proportion of these changes (between 2014 vs. 2018) has been caused by internal regulatory processes and what proportion by external regulatory processes?

MALAYSIA - PRODUCTION ANIMALS: Time taken to achieve new animal health product registration (months) In general, the time taken to registered AH products have increased in 2018 vs. 2014, with the exception of pharmaceutical by MNC







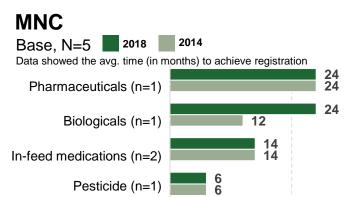
C1a1. Can you tell me what the typical time is for you to achieve registration for AH products for your country/ASEAN currently? C1b. What about vs/ 2014? C1c. What proportion of these changes (between 2014 vs. 2018) has been caused by internal regulatory processes and what proportion by external regulatory processes?

MALAYSIA – AQUA & OTHERS: Time taken to achieve new animal health product registration (months)

For aqua & other products the time taken to get product registration have not change, except biological...which timeline had improved (decreased)









Internal regulatory processes: All activities required for your company to manage the regulatory activity after the dossier has been submitted

External regulatory processes: All activities of the regulatory agency after the dossier has been submitted

Proportion of change in time taken (between 2018 vs. 2014) caused by internal vs external

17% 83%

■ Internal regulatory process ■ External regulatory process

MALAYSIA SUMMARY: Typical time for registration for different categories of product registration



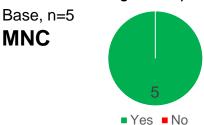
Pharmaceutical		Biolo	gicals		In-feed m	edicati	ons	Pesti	icides		
	No of months			No of months			No of months			No of months	
Category	MNC	Non-MNC	Category	MNC	Non-MNC	Category	MNC	Non-MNC	Category	MNC	Non-MNC
New product	36		New product	24	24	New product			New product		36
Generic	24		Generic	24		Generic			Generic		
Major variation	12		Major variation	6		Major variation			Major variation		
Minor variation	6		Minor variation	2		Minor variation			Minor variation		
Re-registration	6	1	Re-registration	6	1	Re-registration		1	Re-registration	12	12

NOTE: Not all managers provide us detailed timeline by product categories. We have recorded down all the answers given. Hence, the base is very small. Use with caution

MALAYSIA – PHARMACEUTICALS: Typical time for registration for different categories of product registration



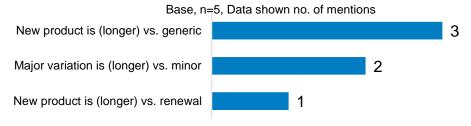
Are there significant differences in typical time for registration for [THERAPEUTIC AREA] between different categories (new products vs. generic products vs. major variation vs. minor variations vs. re-registration)?



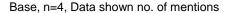


■Yes ■No

Comparison between timeline for registration on different category of product registration



Comparison between timeline for registration on different category of product registration



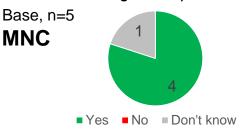


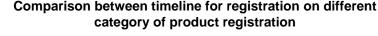
C1a: Are there significant differences in terms of typical time for registration of <u>Pharmaceuticals</u> for your country / ASEAN for different categories of product registration (new products vs. generic products vs. major variation vs. minor variation vs. re-registration)

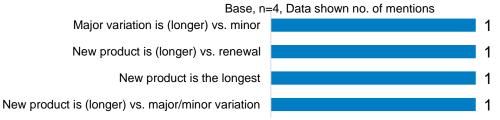
MALAYSIA – BIOLOGICALS: Typical time for registration for different categories of product registration



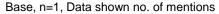
Are there significant differences in typical time for registration for [THERAPEUTIC AREA] between different categories (new products vs. generic products vs. major variation vs. minor variations vs. re-registration)?

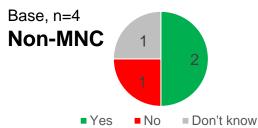


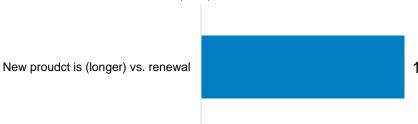




Comparison between timeline for registration on different category of product registration





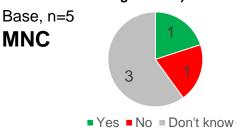


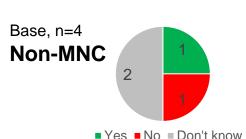
C2a: Are there significant differences in terms of typical time for registration of Biologicals for your country / ASEAN for different categories of product registration (new products vs. generic products vs. major variation vs. minor variation vs. re-registration)

MALAYSIA – IN-FEED MEDICATIONS: Typical time for registration for different categories of product registration



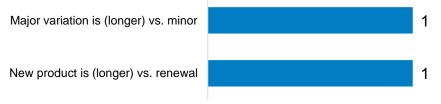
Are there significant differences in typical time for registration for [THERAPEUTIC AREA] between different categories (new products vs. generic products vs. major variation vs. minor variations vs. re-registration)?





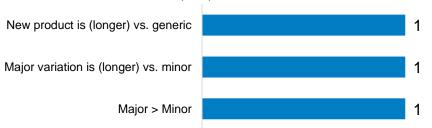
Comparison between timeline for registration on different category of product registration





Comparison between timeline for registration on different category of product registration

Base, n=1, Data shown no. of mentions

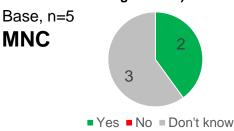


C3a: Are there significant differences in terms of typical time for registration of <u>In-feed medications</u> for your country / ASEAN for different categories of product registration (new products vs. generic products vs. major variation vs. re-registration)

MALAYSIA – PESTICIDES: Typical time for registration for different categories of product registration



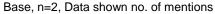
Are there significant differences in typical time for registration for [THERAPEUTIC AREA] between different categories (new products vs. generic products vs. major variation vs. minor variations vs. re-registration)?



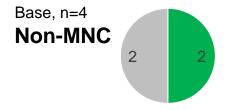
Comparison between timeline for registration on different category of product registration



Comparison between timeline for registration on different category of product registration







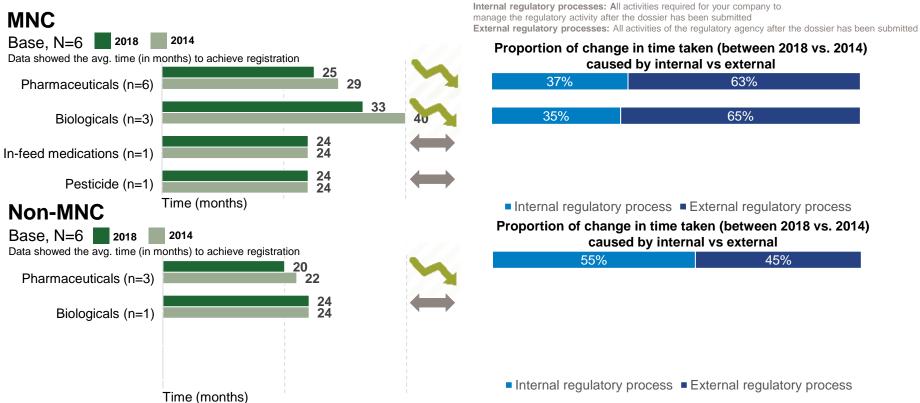
■ Yes ■ No ■ Don't know
C4a: Are there significant differences in terms of typical time for registration of Pesticides for your country / ASEAN for different categories of product registration (new products vs. generic products vs. major variation vs. minor variation vs. re-registration)

INDONESIA - COMPANION ANIMALS: Time taken to achieve new animal health product registration (months)

Companion animal

According to the managers, time taken to achieved registration had reduced for pharmaceutical and biologicals. No change to in-feed medications and pesticides





C1a1. Can you tell me what the typical time is for you to achieve registration for AH products for your country/ASEAN currently? C1b. What about vs/ 2014? C1c. What proportion of these changes (between 2014 vs. 2018) has been caused by internal regulatory processes and what proportion by external regulatory processes?

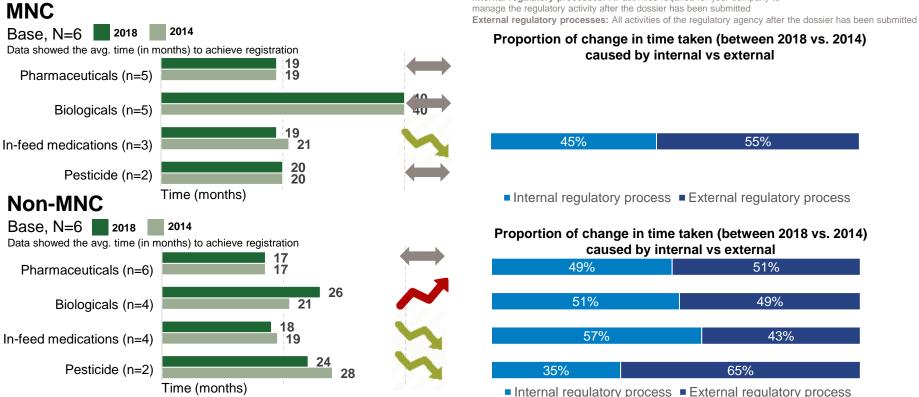
INDONESIA - PRODUCTION ANIMALS: Time taken to achieve new animal health product registration (months)

MNC and non-MNC disagreed on the time taken to for AH product registration. MNC said the timeline has reduced, while non-MNC said



Production animal

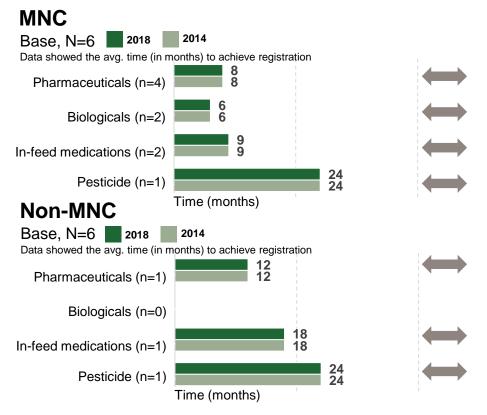
increased in timeline Internal regulatory processes: All activities required for your company to manage the regulatory activity after the dossier has been submitted



C1a1. Can you tell me what the typical time is for you to achieve registration for AH products for your country/ASEAN currently? C1b. What about vs/ 2014? C1c. What proportion of these changes (between 2014 vs. 2018) has been caused by internal regulatory processes and what proportion by external regulatory processes?

INDONESIA – AQUA & OTHERS: Time taken to achieve new animal health product registration (months) No change to the timeline of aqua and other products in Indonesia





C1a1. Can you tell me what the typical time is for you to achieve registration for AH products for your country/ASEAN currently? C1b. What about vs/ 2014? C1c. What proportion of these changes (between 2014 vs. 2018) has been caused by internal regulatory processes and what proportion by external regulatory processes?

INDONESIA SUMMARY: Typical time for registration for different categories of product registration



Pharmaceutical		Biolo	gicals		In-feed m	edicati	ons	Pest	icides		
	No of months			No of months			No of months			No of months	
Category	MNC	Non-MNC	Category	MNC	Non-MNC	Category	MNC	Non-MNC	Category	MNC	Non-MNC
New product	24	24	New product	24	24	New product	18	24	New product	18	36
Generic	18	12	Generic	18		Generic	15	12	Generic	12	12
Major variation	6	8	Major variation	6	8	Major variation	6	8	Major variation	6	12
Minor variation	3	3	Minor variation	3	3	Minor variation	3	3	Minor variation	3	6
Re-registration	12	18	Re-registration	12	18	Re-registration		18	Re-registration		24

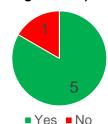
NOTE: Not all managers provide us detailed timeline by product categories. We have recorded down all the answers given. Hence, the base is very small. Use with caution

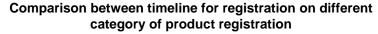
INDONESIA – PHARMACEUTICALS: Typical time for registration for different categories of product registration

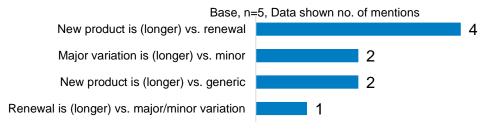


Are there significant differences in typical time for registration for [THERAPEUTIC AREA] between different categories (new products vs. generic products vs. major variation vs. minor variations vs. re-registration)?



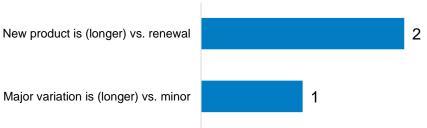


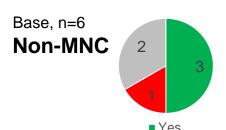




Comparison between timeline for registration on different category of product registration

Base, n=3, Data shown no. of mentions



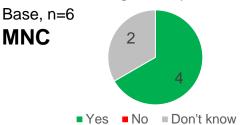


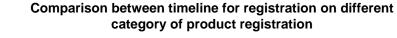
C1a: Are there significant differences in terms of typical time for registration of <u>Pharmaceuticals</u> for your country / ASEAN for different categories of product registration (new products vs. generic products vs. major variation vs. minor variation vs. re-registration)

INDONESIA – BIOLOGICALS: Typical time for registration for different categories of product registration



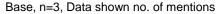
Are there significant differences in typical time for registration for [THERAPEUTIC AREA] between different categories (new products vs. generic products vs. major variation vs. minor variations vs. re-registration)?

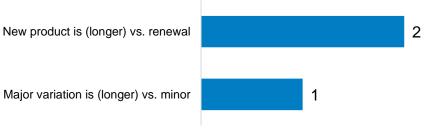


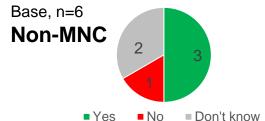




Comparison between timeline for registration on different category of product registration





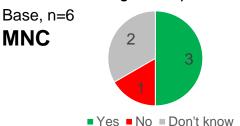


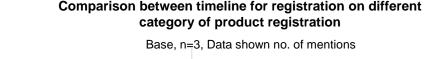
C2a: Are there significant differences in terms of typical time for registration of <u>Biologicals</u> for your country / ASEAN for different categories of product registration (new products vs. generic products vs. major variation vs. minor variation vs. re-registration)

INDONESIA – IN-FEED MEDICATIONS: Typical time for registration for different categories of product registration



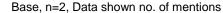
Are there significant differences in typical time for registration for [THERAPEUTIC AREA] between different categories (new products vs. generic products vs. major variation vs. minor variations vs. re-registration)?

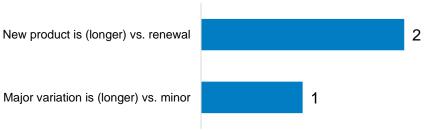


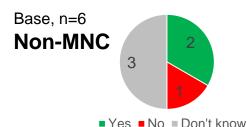




Comparison between timeline for registration on different category of product registration





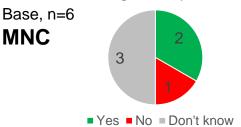


C3a: Are there significant differences in terms of typical time for registration of <u>In-feed medications</u> for your country / ASEAN for different categories of product registration (new products vs. generic products vs. major variation vs. minor variation vs. re-registration)

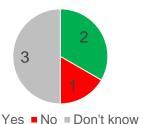
INDONESIA – PESTICIDES: Typical time for registration for different categories of product registration



Are there significant differences in typical time for registration for [THERAPEUTIC AREA] between different categories (new products vs. generic products vs. major variation vs. minor variations vs. re-registration)?



Base, n=6

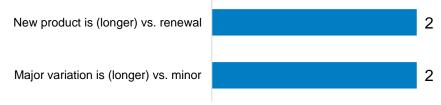




4

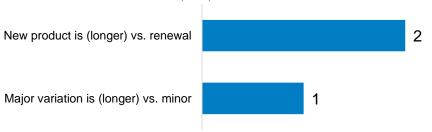
Comparison between timeline for registration on different category of product registration

Base, n=2, Data shown no. of mentions



Comparison between timeline for registration on different category of product registration

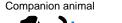
Base, n=2, Data shown no. of mentions



■ Yes
■ No
■ Don't know C4a: Are there significant differences in terms of typical time for registration of Pesticides for your country / ASEAN for different categories of product registration (new products vs. generic products vs. major variation vs. minor variation vs. re-registration)

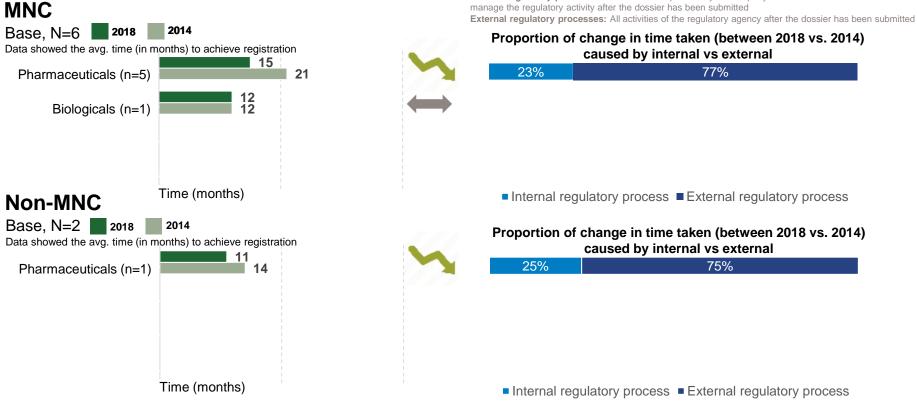
THAILAND - COMPANION ANIMALS: Time taken to achieve new animal health product registration (months)

In general the timeline needed for product registration has reduced for all most of the therapeutic areas



Internal regulatory processes: All activities required for your company to





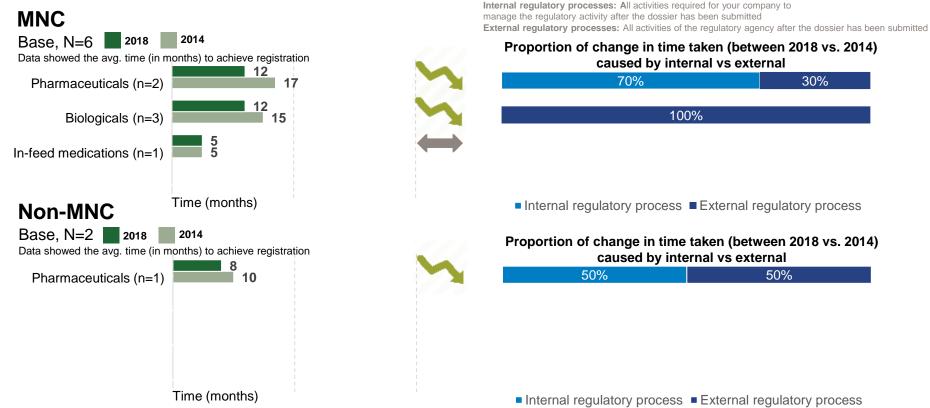
THAILAND - PRODUCTION ANIMALS: Time taken to achieve new animal health product registration (months)

In general the timeline needed for product registration has reduced for all most of the therapeutic areas



30%

50%



C1a1. Can you tell me what the typical time is for you to achieve registration for AH products for your country/ASEAN currently? C1b. What about vs/ 2014? C1c. What proportion of these changes (between 2014 vs. 2018) has been caused by internal regulatory processes and what proportion by external regulatory processes?

THAILAND SUMMARY: Typical time for registration for different categories of product registration



Pharmaceutical		Biolo	gicals		In-feed medications Pest			icides			
	No of months			No of months			No of months			No of months	
Category	MNC	Non-MNC	Category	MNC	Non-MNC	Category	MNC	Non-MNC	Category	MNC	Non-MNC
New product	12	11	New product			New product			New product	4	
Generic	8	8	Generic	8		Generic			Generic		
Major variation	6	5	Major variation	8		Major variation			Major variation	2	
Minor variation	3	3	Minor variation	3		Minor variation			Minor variation	2	
Re-registration			Re-registration			Re-registration			Re-registration		

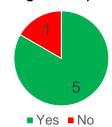
NOTE: Not all managers provide us detailed timeline by product categories. We have recorded down all the answers given. Hence, the base is very small. Use with caution

THAILAND – PHARMACEUTICALS: Typical time for registration for different categories of product registration



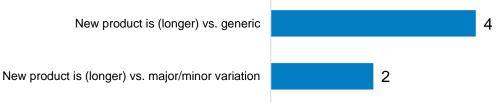
Are there significant differences in typical time for registration for [THERAPEUTIC AREA] between different categories (new products vs. generic products vs. major variation vs. minor variations vs. re-registration)?





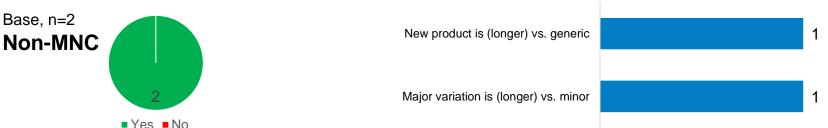
Comparison between timeline for registration on different category of product registration





Comparison between timeline for registration on different category of product registration

Base, n=2, Data shown no. of mentions

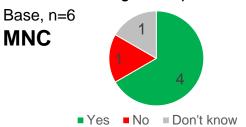


C1a: Are there significant differences in terms of typical time for registration of <u>Pharmaceuticals</u> for your country / ASEAN for different categories of product registration (new products vs. generic products vs. major variation vs. minor variation vs. re-registration)

THAILAND – BIOLOGICALS: Typical time for registration for different categories of product registration

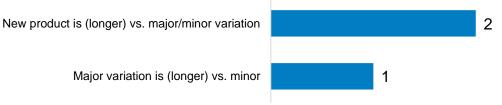


Are there significant differences in typical time for registration for [THERAPEUTIC AREA] between different categories (new products vs. generic products vs. major variation vs. minor variations vs. re-registration)?



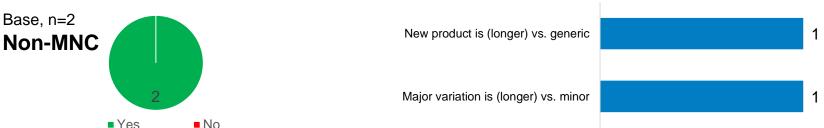
Comparison between timeline for registration on different category of product registration





Comparison between timeline for registration on different category of product registration

Base, n=2, Data shown no. of mentions



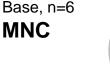
C2a: Are there significant differences in terms of typical time for registration of Biologicals for your country / ASEAN for different categories of product registration (new products vs. generic products vs. major variation vs. minor variation vs. re-registration)

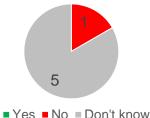
185

THAILAND – IN-FEED MEDICATIONS: Typical time for registration for different categories of product registration



Are there significant differences in typical time for registration for [THERAPEUTIC AREA] between different categories (new products vs. generic products vs. major variation vs. minor variations vs. re-registration)?





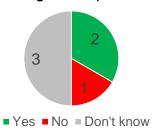
C3a: Are there significant differences in terms of typical time for registration of <u>In-feed medications</u> for your country / ASEAN for different categories of product registration (new products vs. generic products vs. major variation vs. re-registration)

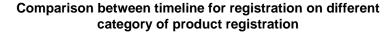
THAILAND – PESTICIDES: Typical time for registration for different categories of product registration



Are there significant differences in typical time for registration for [THERAPEUTIC AREA] between different categories (new products vs. generic products vs. major variation vs. minor variations vs. re-registration)?







Base, n=2, Data shown no. of mentions

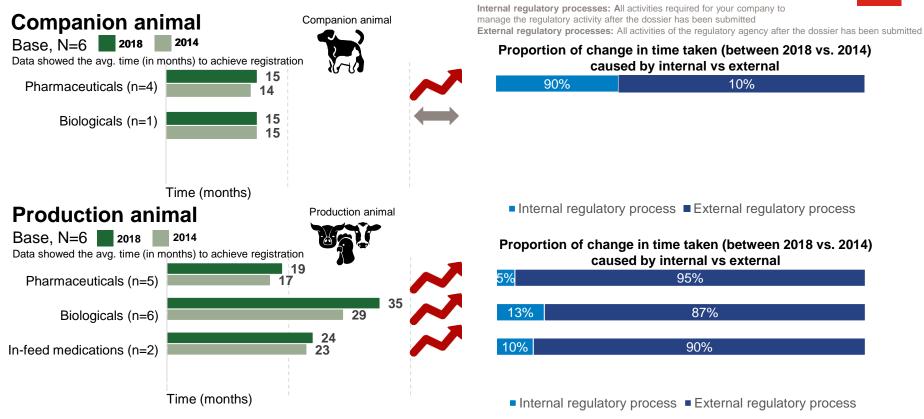
New product is (longer) vs. major/minor variation

C4a: Are there significant differences in terms of typical time for registration of <u>Pesticides</u> for your country / ASEAN for different categories of product registration (new products vs. generic products vs. major variation vs. minor variation vs. re-registration)

VIETNAM - MNC: Time taken to achieve new animal health product registration (months)

In general the timeline needed for product registration has increased for all most of the therapeutic areas for companion and production animals



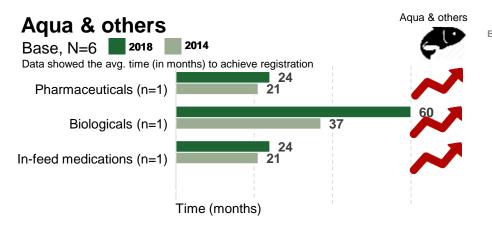


C1a1. Can you tell me what the typical time is for you to achieve registration for AH products for your country/ASEAN currently? C1b. What about vs/ 2014? C1c. What proportion of these changes (between 2014 vs. 2018) has been caused by internal regulatory processes and what proportion by external regulatory processes?

VIETNAM - MNC: Time taken to achieve new animal health product registration (months)

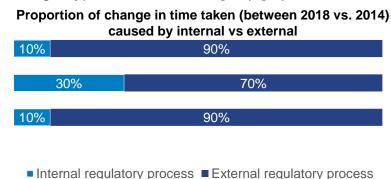
In general the timeline needed for product registration has increased for all most of the therapeutic areas for aqua and others





iternal regulatory processes: All activities required for your company to anage the regulatory activity after the dossier has been submitted

External regulatory processes: All activities of the regulatory agency after the dossier has been submitted



VIETNAM SUMMARY: Typical time for registration for different categories of product registration



Pharmaceutical		Biolo	gicals		In-feed medications Pes			Pesti	ticides		
	No of months			No of months			No of months			No of months	
Category	MNC	Non-MNC	Category	MNC	Non-MNC	Category	MNC	Non-MNC	Category	MNC	Non-MNC
New product	42		New product	48		New product	38		New product	40	
Generic	24		Generic	24		Generic	12		Generic	12	
Major variation	6		Major variation	9		Major variation	6		Major variation	8	
Minor variation	2		Minor variation	5		Minor variation	3		Minor variation	2	
Re-registration	3		Re-registration	6		Re-registration	6		Re-registration		

NOTE: Not all managers provide us detailed timeline by product categories. We have recorded down all the answers given. Hence, the base is very small. Use with caution

VIETNAM – MNC: Typical time for registration for different categories of product registration



Are there significant differences in typical time for registration for [THERAPEUTIC AREA] between different categories (new products vs. generic products vs. major variation vs. minor variations vs. re-registration)?

Base, n=6

Pharmaceuticals



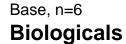
Comparison between timeline for registration on different category of product registration

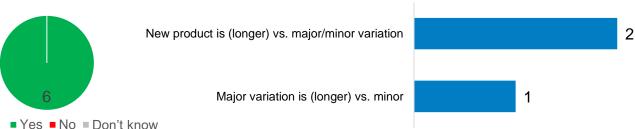




Comparison between timeline for registration on different category of product registration

Base, n=6, Data shown no. of mentions





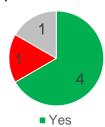
C1a: Are there significant differences in terms of typical time for registration of <u>Pharmaceuticals</u> for your country / ASEAN for different categories of product registration (new products vs. generic products vs. major variation vs. minor variation vs. re-registration)

VIETNAM – MNC: Typical time for registration for different categories of product registration

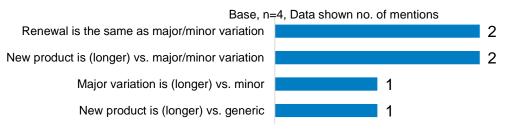


Are there significant differences in typical time for registration for [THERAPEUTIC AREA] between different categories (new products vs. generic products vs. major variation vs. minor variations vs. re-registration)?

Base, n=6
In-feed
medications

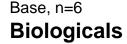


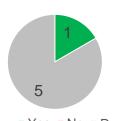
Comparison between timeline for registration on different category of product registration



Comparison between timeline for registration on different category of product registration

Base, n=1, Data shown no. of mentions





New product is (longer) vs. generic 1

Major variation is (longer) vs. minor 1

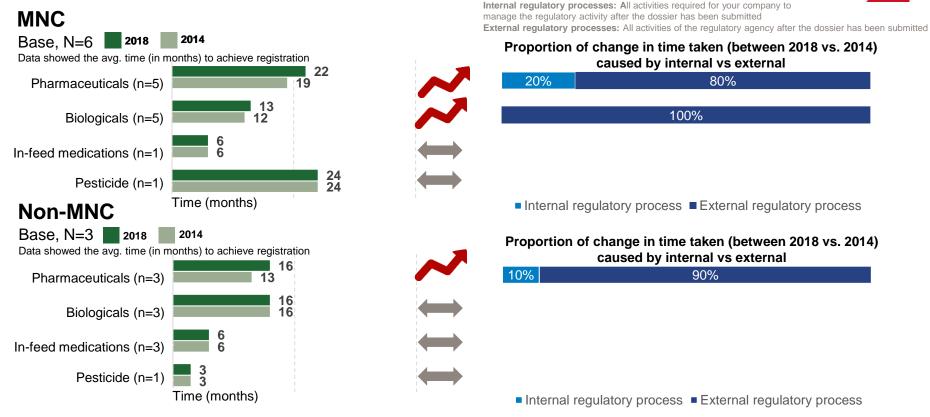
■ Yes ■ No ■ Don't know

C1a: Are there significant differences in terms of typical time for registration of Pharmaceuticals for your country / ASEAN for different categories of product registration (new products vs. generic products vs. major variation vs. minor variation vs. re-registration)

PHILIPPINES - COMPANION ANIMALS: Time taken to achieve new animal health product registration (months)
In general the timeline needed for product registration has reduced or
remains the same all most of the therapeutic areas for companion animals





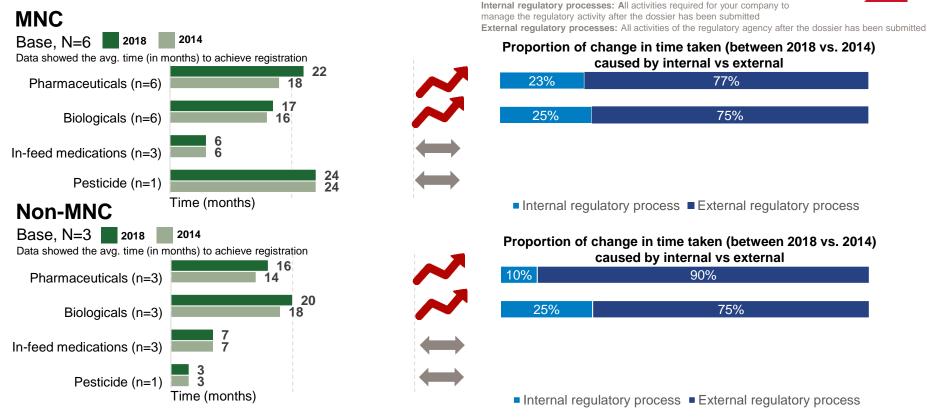


C1a1. Can you tell me what the typical time is for you to achieve registration for AH products for your country/ASEAN currently? C1b. What about vs/ 2014? C1c. What proportion of these changes (between 2014 vs. 2018) has been caused by internal regulatory processes and what proportion by external regulatory processes?

PHILIPPINES - PRODUCTION ANIMALS: Time taken to achieve new animal health product registration (months)

Different of views from MNC vs. non-MNC on timeline taken to achieve registration for pharmaceuticals and biologicals





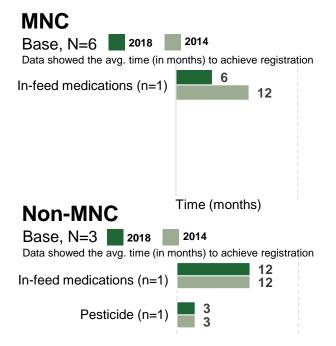
C1a1. Can you tell me what the typical time is for you to achieve registration for AH products for your country/ASEAN currently? C1b. What about vs/ 2014? C1c. What proportion of these changes (between 2014 vs. 2018) has been caused by internal regulatory processes and what proportion by external regulatory processes?

PHILIPPINES – AQUA & OTHERS: Time taken to achieve new animal health product registration (months)

MNC felt that the time taken to achieved new registration in aqua and others are now shorter...









Time (months)

PHILIPPINES SUMMARY: Typical time for registration for different categories of product registration



Pharmaceutical		Biolo	gicals		In-feed mo	edicati	ons	Pest	icides		
	No of months			No of months			No of months			No of months	
Category	MNC	Non-MNC	Category	MNC	Non-MNC	Category	MNC	Non-MNC	Category	MNC	Non-MNC
New product	24	18	New product	24	24	New product	24		New product	24	
Generic	12	6	Generic	12	12	Generic	12		Generic		
Major variation	12	18	Major variation	6		Major variation	12	6	Major variation	6	
Minor variation	6	12	Minor variation	3		Minor variation	12		Minor variation	3	
Re-registration	12	12	Re-registration	3		Re-registration	6	6	Re-registration	24	

NOTE: Not all managers provide us detailed timeline by product categories. We have recorded down all the answers given. Hence, the base is very small. Use with caution

PHILIPPINES – PHARMACEUTICALS: Typical time for registration for different categories of product registration

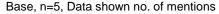


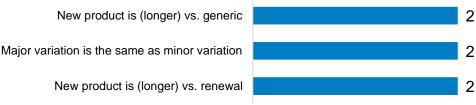
Are there significant differences in typical time for registration for [THERAPEUTIC AREA] between different categories (new products vs. generic products vs. major variation vs. minor variations vs. re-registration)?





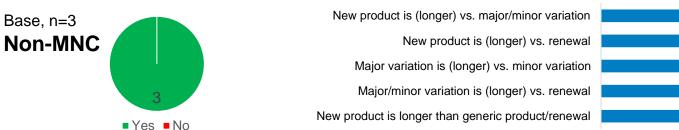
Comparison between timeline for registration on different category of product registration





Comparison between timeline for registration on different category of product registration

Base, n=3, Data shown no. of mentions

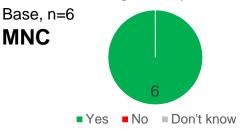


C1a: Are there significant differences in terms of typical time for registration of <u>Pharmaceuticals</u> for your country / ASEAN for different categories of product registration (new products vs. generic products vs. major variation vs. minor variation vs. re-registration)

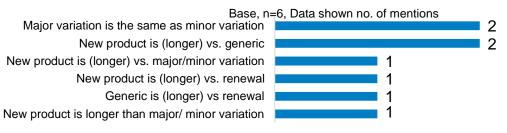
PHILIPPINES – BIOLOGICALS: Typical time for registration for different categories of product registration



Are there significant differences in typical time for registration for [THERAPEUTIC AREA] between different categories (new products vs. generic products vs. major variation vs. minor variations vs. re-registration)?

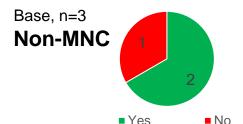


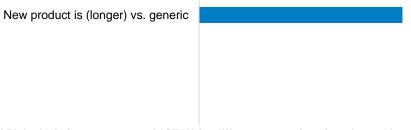
Comparison between timeline for registration on different category of product registration



Comparison between timeline for registration on different category of product registration

Base, n=2, Data shown no. of mentions



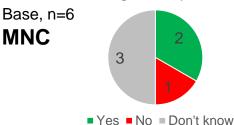


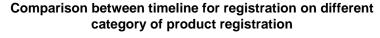
C2a: Are there significant differences in terms of typical time for registration of Biologicals for your country / ASEAN for different categories of product registration (new products vs. generic products vs. major variation vs. minor variation vs. re-registration)

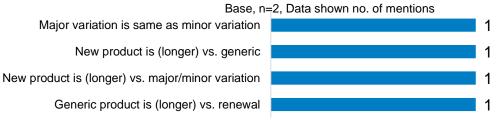
PHILIPPINES – IN-FEED MEDICATIONS: Typical time for registration for different categories of product registration



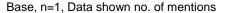
Are there significant differences in typical time for registration for [THERAPEUTIC AREA] between different categories (new products vs. generic products vs. major variation vs. minor variations vs. re-registration)?

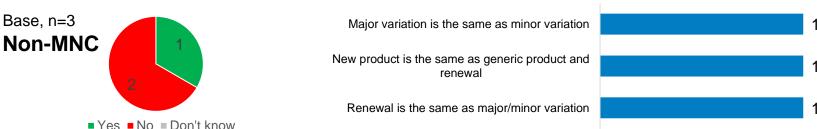






Comparison between timeline for registration on different category of product registration



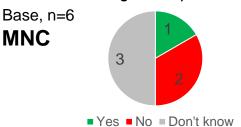


C3a: Are there significant differences in terms of typical time for registration of <u>In-feed medications</u> for your country / ASEAN for different categories of product registration (new products vs. generic products vs. major variation vs. minor variation vs. re-registration)

PHILIPPINES – IN-FEED MEDICATIONS: Typical time for registration for different categories of product registration



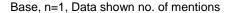
Are there significant differences in typical time for registration for [THERAPEUTIC AREA] between different categories (new products vs. generic products vs. major variation vs. minor variations vs. re-registration)?

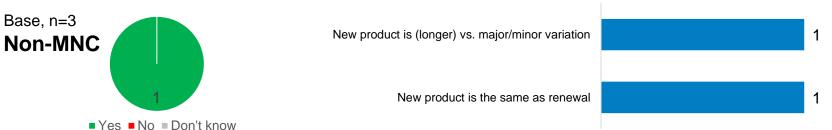


Comparison between timeline for registration on different category of product registration



Comparison between timeline for registration on different category of product registration



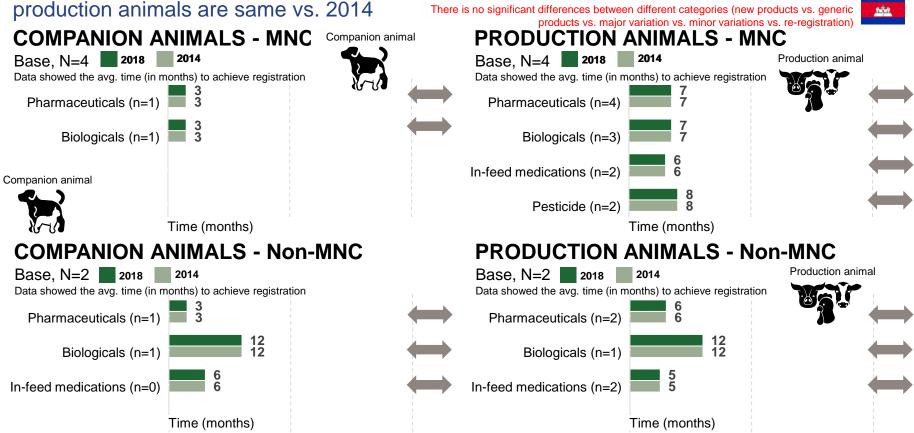


C3a: Are there significant differences in terms of typical time for registration of In-feed medications for your country / ASEAN for different categories of product registration (new products vs. generic products vs. major variation vs. minor variation vs. re-registration)

CAMBODIA – COMPANION & PRODUCTION ANIMALS: Time taken to achieve new animal health product registration (months)

Timeline taken to achieved registration for both companion and





C1a1. Can you tell me what the typical time is for you to achieve registration for AH products for your country/ASEAN currently? C1b. What about vs/ 2014? C1c. What proportion of these changes (between 2014 vs. 2018) has been caused by internal regulatory processes and what proportion by external regulatory processes?

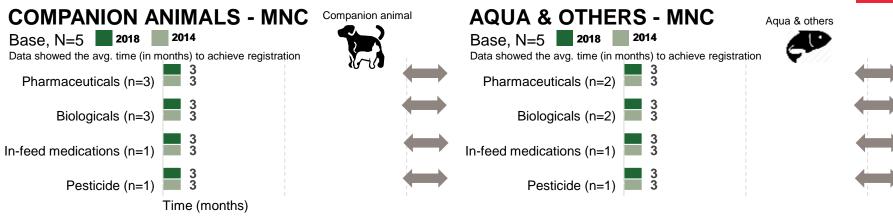
Timeline taken to achieved registration for both companion, production



animals and aqua are same vs. 2014

There is no significant differences between different categories (new products vs. generic products vs. major variation vs. minor variations vs. re-registration)







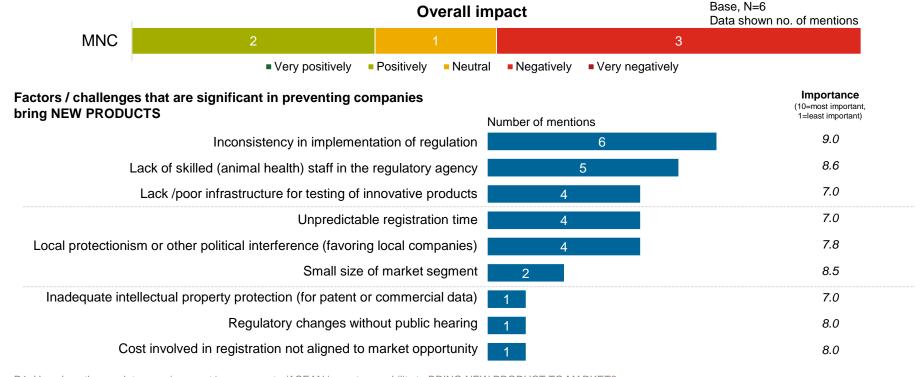
C1a1. Can you tell me what the typical time is for you to achieve registration for AH products for your country/ASEAN currently? C1b. What about vs/ 2014? C1c. What proportion of these changes (between 2014 vs. 2018) has been caused by internal regulatory processes and what proportion by external regulatory processes?



REGIONAL: Impact of regulatory environment in bringing new AH animal health product:

By and large, regional regulatory manager do not find the regulatory environment favorable for new product registration. The main challenges seems to be inconsistency in implementation of regulation and lack of skilled staff in regulatory agency



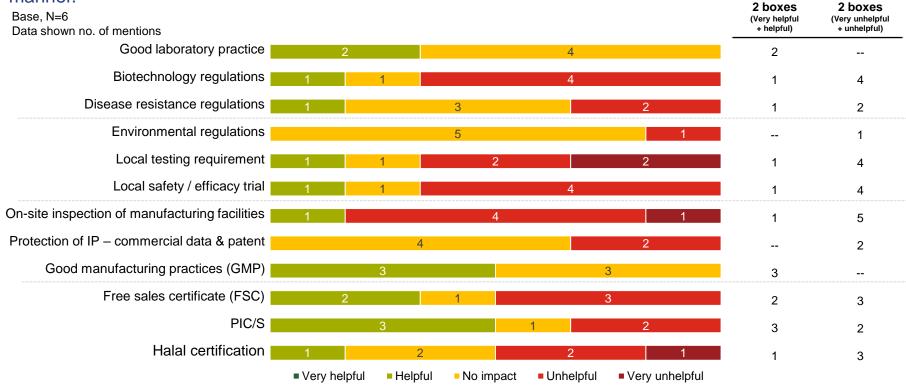


D1. How does the regulatory environment in your country/ASEAN impact your ability to BRING NEW PRODUCT TO MARKET?

D2. Which of these, if any, are significant in preventing you to BRING NEW PRODUCT to your country/ASEAN?

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REGIONAL: Impact of govt. regulation on ability to bring new AH product successfully <u>and</u> timely manner to market On-site inspection of manufacturing facilities, local testing and safety requirements are hailed to be not helpful in bring new products to the market successfully and timely manner.



D3. Thinking about government regulations in your country/ASEAN, how would you assess the impact of each of the areas of regulation listed below on your ABILITY TO BRING NEW PRODUCT successfully and in a timely manner to your country/ASEAN?

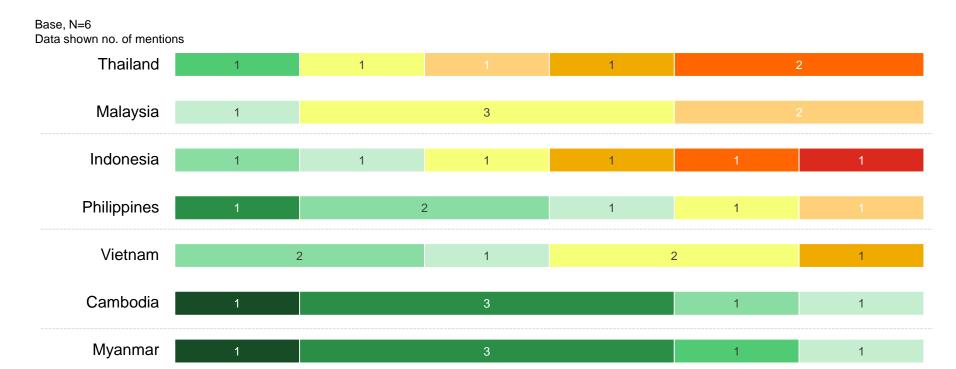
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Bottom

Top

REGIONAL: Level of difficulty of AH product registration – in terms of **process / protocol** across ASEAN Cambodia and Myanmar are deem easy in term of product registration. Indonesia and lesser extent, Thailand are significantly more difficult to get AH product registered.





D4a. Thinking about the level of difficulty of product registration (IN TERMS OF PROCESS /PROTOCOL) of various AH products across ASEAN, how do you rate the level of difficulty across these 7 countries?

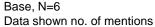
■ Extremely easy

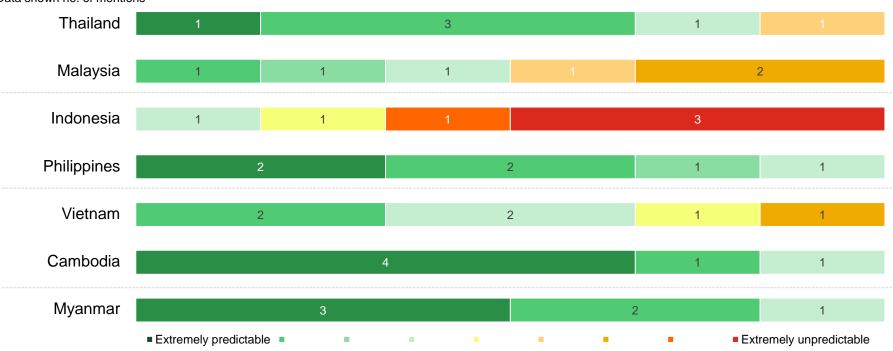
Extremely difficult

REGIONAL: Level of predictability of AH product registration – in terms of timeline across ASEAN

Expectedly, Indonesia is the most unpredictable (timeline) in getting AH products registered. Some companies are considered Malaysia and Vietnam product registration timeline a little unpredictable (too).



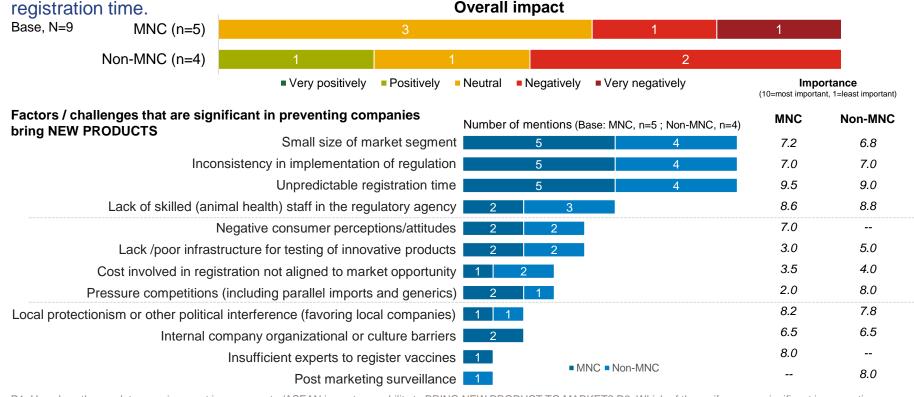




D4b. Thinking about the level of predictability of product registration (IN TERMS OF TIMELINE) of various AH products across ASEAN, how do you rate the level of predictability across these 7 countries?

3 in 5 MNC regulatory managers are do not considered the regulatory environment have a positive nor negative. 2 of 4 non-MNC regulatory managers considered the regulatory environment to have negative impact. The main challenges to bring new AH products to market are small size of the market, inconsistency in regulation implementation and unpredictable



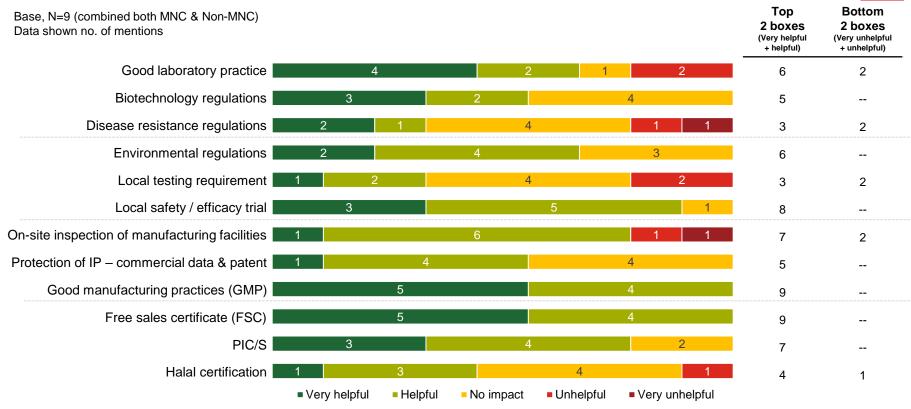


D1. How does the regulatory environment in your country/ASEAN impact your ability to BRING NEW PRODUCT TO MARKET? D2. Which of these, if any, are significant in preventing you © Kynetec June 11, 2019 | ASEAN Animal Health Regulatory Benchmarking Survey – Stage 2 (Online Quantitative)

MALAYSIA: Impact of govt. regulation on ability to bring new AH product successfully <u>and</u> timely manner to market GMP and FSC are considered helpful in bringing new products to market. Disease resistance

regulations and on-site inspection of manufacturing facilities are considered challenges faced



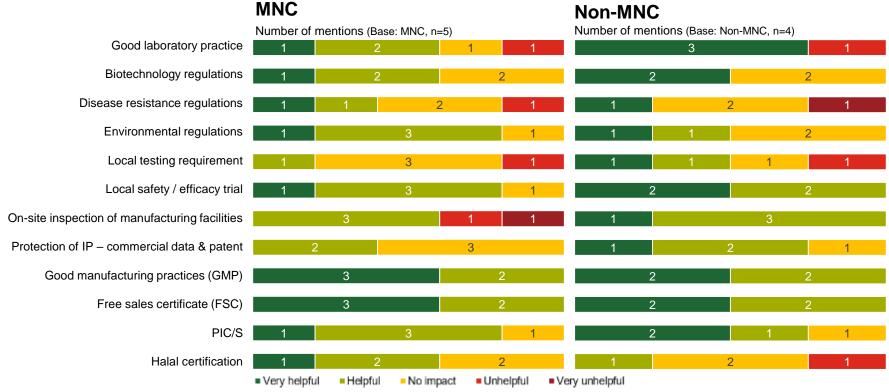


D3. Thinking about Government Regulations in your country/ASEAN, how would you assess the impact of each of the areas of regulation listed below on your ABILITY TO BRING NEW PRODUCT successfully and in a timely manner to your country/ASEAN?

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MALAYSIA: Impact of govt. regulation on ability to bring new AH product successfully <u>and</u> timely manner to market Expectedly, on-site inspection of manufacturing facilities are concerns for MNC companies. Whilst non-MNC find disease resistance regulation to be more 'problematic'.

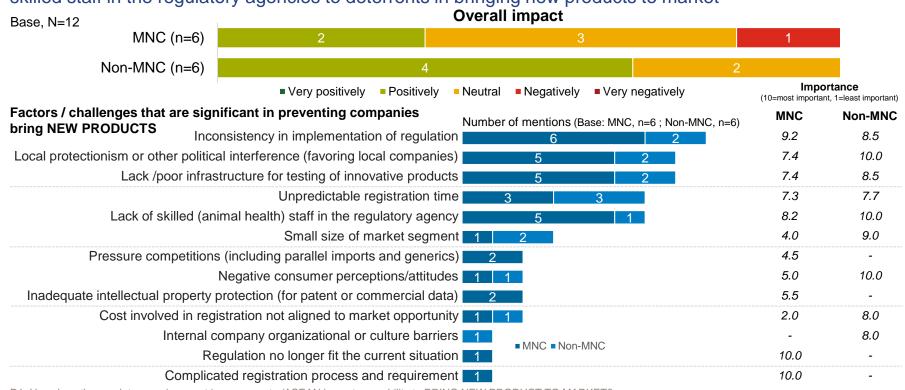




D3. Thinking about Government Regulations in your country/ASEAN, how would you assess the impact of each of the areas of regulation listed below on your ABILITY TO BRING NEW PROUDUCT successfully and in a timely manner to your country/ASEAN?

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Non-MNC considered current regulatory environment in Indonesia to have a more positive impackynetes in bringing new products to market. MNC however considered inconsistency in implementation of regulation, local protectionism, lack of infrastructure for testing innovative products and lack of skilled staff in the regulatory agencies to deterrents in bringing new products to market

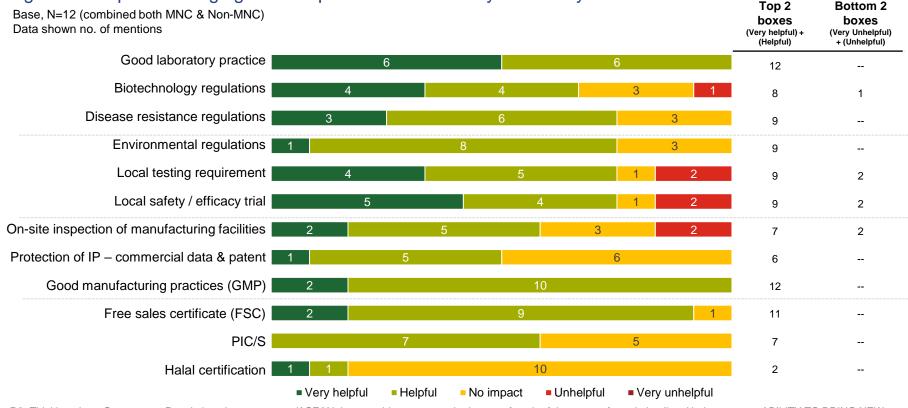


D1. How does the regulatory environment in your <u>country/ASEAN</u> impact your ability to BRING NEW PRODUCT TO MARKET? D2i Which of these, if any, are significant in preventing you to BRING NEW PRODUCT to your country/ASEAN?

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INDONESIA: Impact of govt. regulation on ability to bring new AH product successfully and timely manner to market

Apart from local testing requirements, local safety/efficacy trial and on-site inspection of manufacturing facilities mentioned by a few managers, other areas of regulations do not have significant impact in bringing new AH products successfully and timely to market

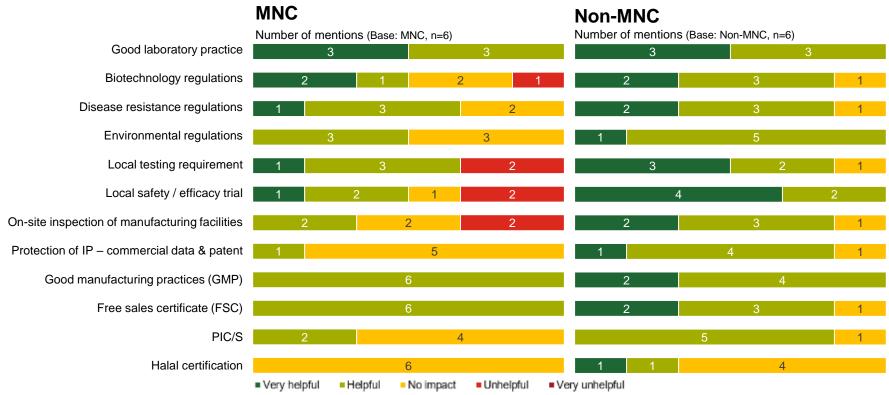


D3. Thinking about Government Regulations in your country/ASEAN, how would you assess the impact of each of the areas of regulation listed below on your ABILITY TO BRING NEW PRODUCT successfully and in a timely manner to your country/ASEAN?

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INDONESIA: Impact of govt. regulation on ability to bring new AH product successfully <u>and</u> timely manner to market No unexpected, non-MNC find different areas of regulation to be helpful in bringing new products to market successfully and timely manner (with the exception of Halal certification).



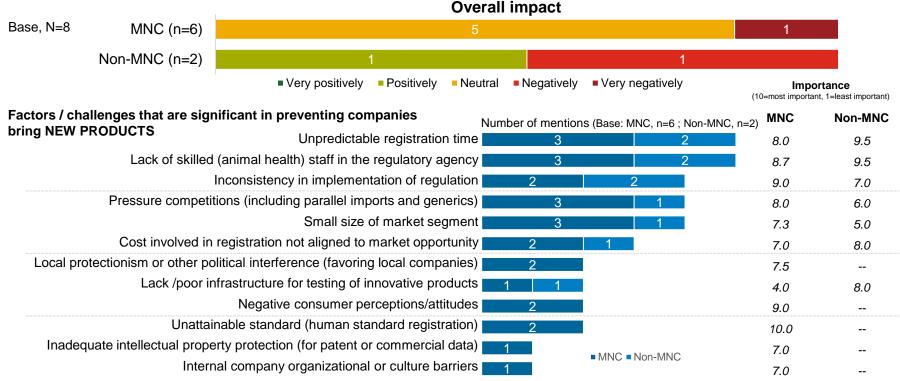


D3. Thinking about Government Regulations in your country/ASEAN, how would you assess the impact of each of the areas of regulation listed below on your ABILITY TO BRING NEW PROUDUCT successfully and in a timely manner to your country/ASEAN?

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THAILAND: Impact of regulatory environment in bringing new AH animal health product

By and large, regulatory managers felt that current regulatory environment in Thailand are neither positive or negative in bringing new AH products to market. Few complaints are related to unpredictable registration timeline and lack of skilled (animal health) staff in regulatory agencies.



D1. How does the regulatory environment in your country/ASEAN impact your ability to BRING NEW PRODUCT TO MARKET? D2. Which of these, if any, are significant in preventing you to BRING NEW PRODUCT to your country/ASEAN?

THAILAND: Impact of govt. regulation on ability to bring new AH product successfully <u>and</u> timely manner to market safety/efficacy trial requirement and on-site inspection of manufacturing facilities in the regulation for AH products are the pain-points experienced in bringing new products to market successfully and timely manner

Base, N=8 (combined both MNC & Non-MNC)

Data shown no. of mentions					(Very helpful) (Helpful)	+ (Very Unhelpful) + (Unhelpful)
Good laboratory practice	2		5		7	1
Biotechnology regulations	1	3		4	4	
Disease resistance regulations	1	4		2	1 5	1
Environmental regulations		5		3	5	
Local testing requirement	1	2	3	2	3	2
Local safety / efficacy trial	1	2	2	3	3	3
On-site inspection of manufacturing facilities	1	2 1		4	3	5
Protection of IP – commercial data & patent	2		4	2	6	
Good manufacturing practices (GMP)	1	4		3	5	
Free sales certificate (FSC)	2	3		2	1 5	1
PIC/S	3		3	2	6	2
Halal certification	1 1		5		1 2	1
	■ Very helpful	■ Helpful ■ No	impact Unhe	elpful • Very unhel	pful	

D3. Thinking about Government Regulations in your country/ASEAN, how would you assess the impact of each of the areas of regulation listed below on your ABILITY TO BRING NEW PROUDCT successfully and in a timely manner to your country/ASEAN?

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Bottom 2

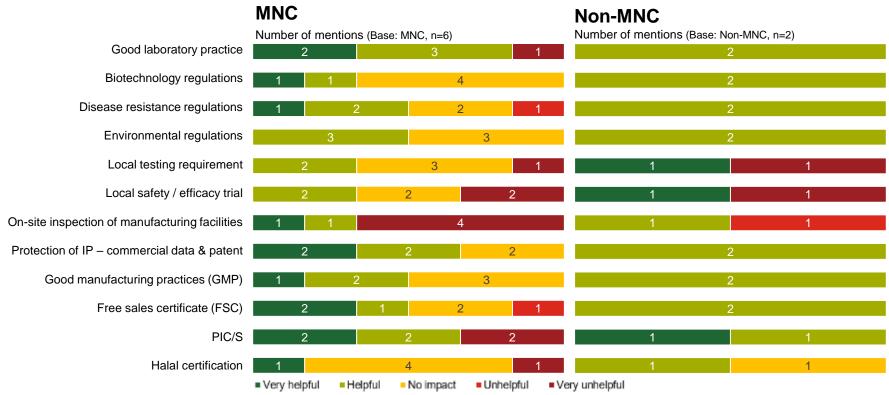
boxes

Top 2

boxes

THAILAND: Impact of govt. regulation on ability to bring new AH product successfully <u>and</u> timely manner to market For some MNC and non-MNC companies, PIC/S requirement remains to be a concern with respective to bringing new AH products to market.





D3. Thinking about Government Regulations in your country/ASEAN, how would you assess the impact of each of the areas of regulation listed below on your ABILITY TO BRING NEW PROUDUCT successfully and in a timely manner to your country/ASEAN?

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THAILAND: Supportive verbatims from qualitative phase interviews & follow-up call backs during quantitative stage with MNCs Why some managers considered GMP, FSC and PIC/S to be helpful in bringing new AH product successfully <u>and</u> timely manner to market?



MNC Number of mentions (Base: MNC, n=6)



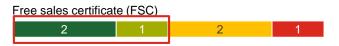
 It is a positive when the companies tried to register EU products. But it can be problematic for companies that want to registered US or other non-PIC/S compliance AH products.



Have not faced many difficulties. Mainly been internal factors. - MNC



I gave 5 rating means GMP is needed for a pharmaceutical company and it is a first assessment to consider a quality and safety of products. – MNC



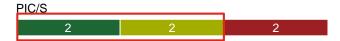
 There is no major issue with the FSC for both local and MNC companies on generic product. FSC is easy to apply – just need to request the paper from the origin...and generally easy to obtain.



No, we don't have the problem. I think it will be a problem when the product is brand new that was not registered anywhere else yet. –MNC From my experience, I don't have any problem, because, we have regional team support – MNC



Can use this FSC as replacement / 2nd option for GMP certificate. – MNC



For PIC/S compliance manufacturer plants, the burden is relatively minimal as requirements / documentations needed are lesser. All agreed that the high standard
of PIC/S GMP ensures (good) product's quality.



The Director tries to compromise. Recently they told usokay they can accept the WHO GMP standard but they accept it to be equal to PICS certified by other authority. – MNC



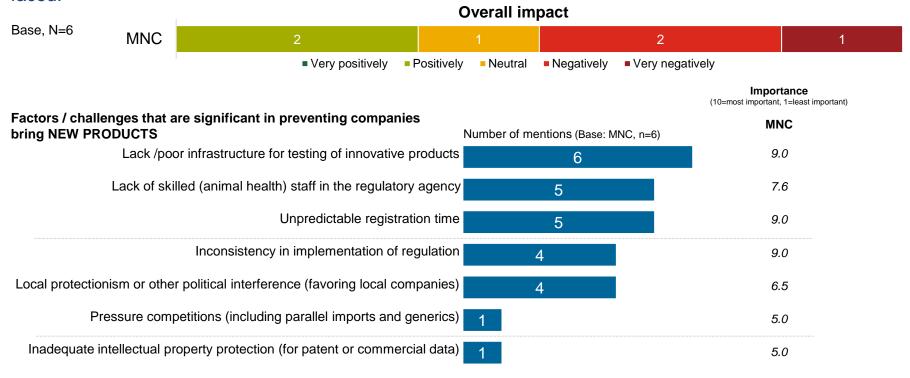
Thai FDA is recognize PIC/S standard, if a manufacturer have certified PIC/S standard, it is very easy and very welcome from Thai FDA. The required document just only 4 items, the approval timeframe is just 1-2 months. – MNC



At the beginning time of GMP regulation implemented, the practice and requirement for submission from the Thai FDA is uncertain. Now, the Thai FDA have clear standard practice and requirement already, so it helps us a lot to understand what they want. As the result, that the submission in PIC/s category is easier than the other category (PIC/s certified and Non-PIC/s). - MNC



Half of AH companies claimed that the current regulatory environment have negative impact to bringing new AH products to market. Lack of infrastructure for testing of innovative products, lack of skilled staff in regulatory agencies and unpredictable registration time are the main challenges faced.



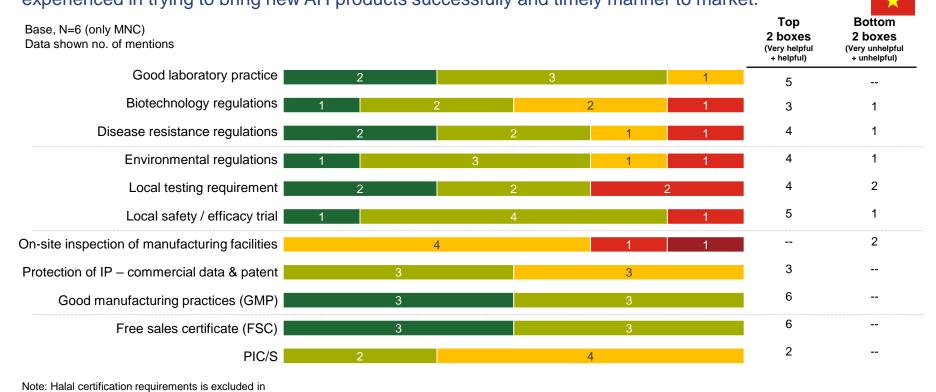
D1. How does the regulatory environment in your country/ASEAN impact your ability to BRING NEW PRODUCT TO MARKET? D2. Which of these, if any, are significant in preventing you to BRING NEW PRODUCT to your country/ASEAN?

Very unhelpful

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VIETNAM: Impact of govt. regulation on ability to bring new AH product successfully and timely manner to market

On-site inspection of manufacturing facilities and local testing requirements are the main issues experienced in trying to bring new AH products successfully and timely manner to market.



D3. Thinking about Government Regulations in your country/ASEAN, how would you assess the impact of each of the areas of regulation listed below on your ABILITY TO BRING NEW PRODUCT successfully and in a timely manner to your country/ASEAN?

No impact

Unhelpful

Helpful

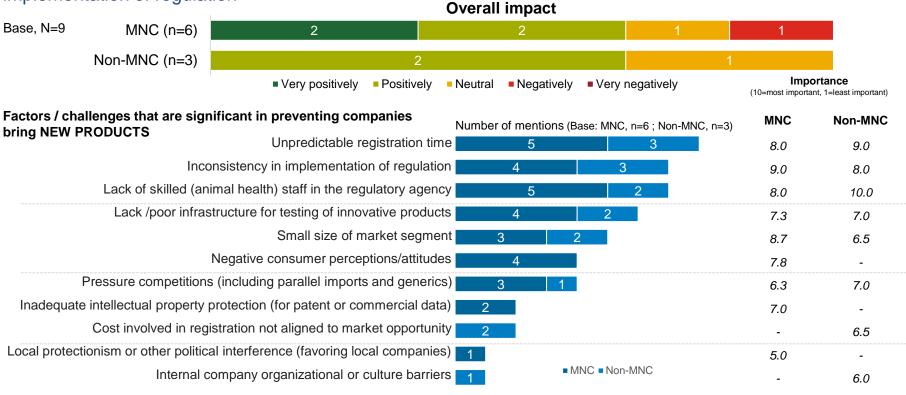
Very helpful

the report as it is not application to this country

PHILIPPINES: Impact of regulatory environment in bringing new AH animal health product

Most MNC and non-MNC regulatory managers find the regulatory environment in Philippines to be conducive to bringing new AH products to market. There are however still challenges faced – unpredictable registration time, lack of skilled staff and inconsistency in implementation of regulation





PHILIPPINES: Impact of govt. regulation on ability to bring new AH product successfully <u>and</u> timely manner to market Expectedly, PIC/S requirements will have (difficult) impact in bringing new products to market successfully and timely manner in the Philippines

Top 2 Bottom 2 Base, N=9 (combined both MNC & Non-MNC) boxes boxes Data shown no. of mentions (Very helpful) + (Very Unhelpful) (Helpful) + (Unhelpful) Good laboratory practice 7 Biotechnology regulations 5 Disease resistance regulations Environmental regulations Local testing requirement 6 Local safety / efficacy trial 6 On-site inspection of manufacturing facilities Protection of IP – commercial data & patent 6 Good manufacturing practices (GMP) Free sales certificate (FSC) PIC/S 5

Note: Halal certification requirements is excluded in the report as it is not application to this country

Very helpful Helpful No impact Unhelpful Very unhelpful

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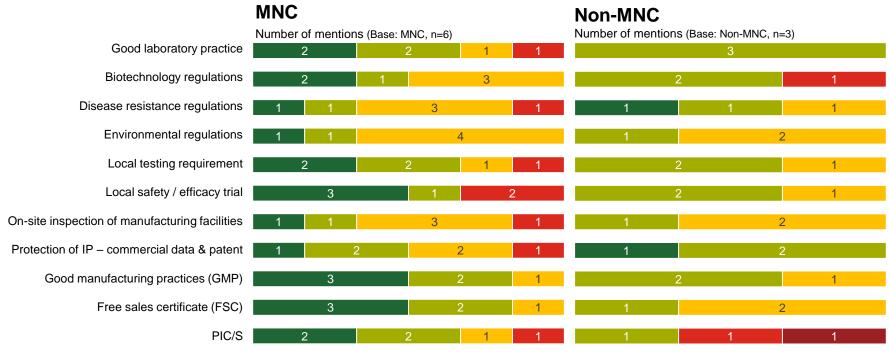
D3. Thinking about Government Regulations in your country/ASEAN, how would you assess the impact of each of the areas of regulation listed below on your ABILITY TO BRING NEW PRODUCT successfully and in a timely manner to your country/ASEAN?

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PHILIPPINES: Impact of govt. regulation on ability to bring new AH product successfully and timely manner to market

PIC/S requirement is more concerning to non-MNC, whilst local safety/efficacy trials post to be more problematic to MNC companies in bringing new AH product successfully <u>and</u> timely manner





Note: Halal certification requirements is excluded in the report as it is not application to this country

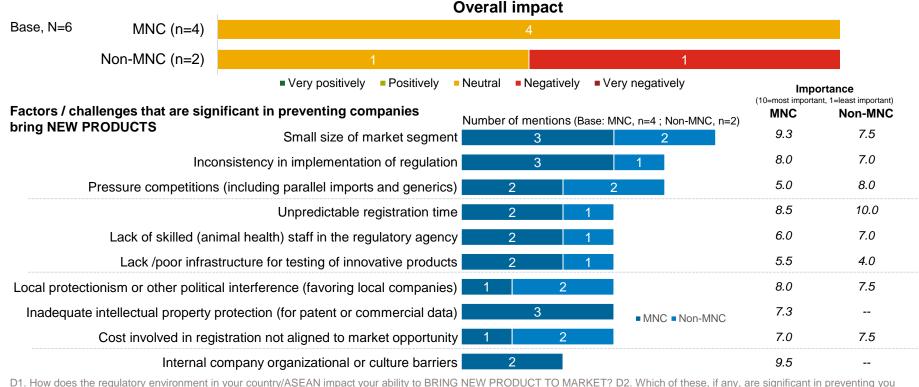
■ Very helpful ■ Helpful ■ No impact ■ Unhelpful ■ Very unhelpful

CAMBODIA: Impact of regulatory environment in bringing new AH animal health product

As most MNC sell in Myanmar through distributors, they tend to be neutral in their assessment on impact of regulatory environment in bringing new AH products to market. The concern to these MNC companies are small market size and inconsistency in implementation of regulation. 1 in 2 non-MNC said the current regulatory environment has negative impact.





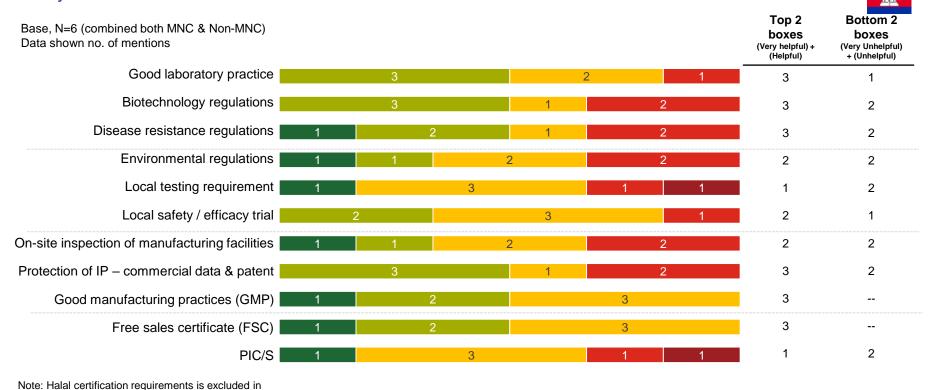


to BRING NEW PRODUCT to your country/ASEAN?

CAMBODIA: Impact of govt. regulation on ability to bring new AH product successfully <u>and</u> timely manner to market Local testing requirements is not helpful in bringing AH products successfully and timely manner.

Very helpful

the report as it is not application to this country



No impact

Unhelpful

Very unhelpful

Helpful

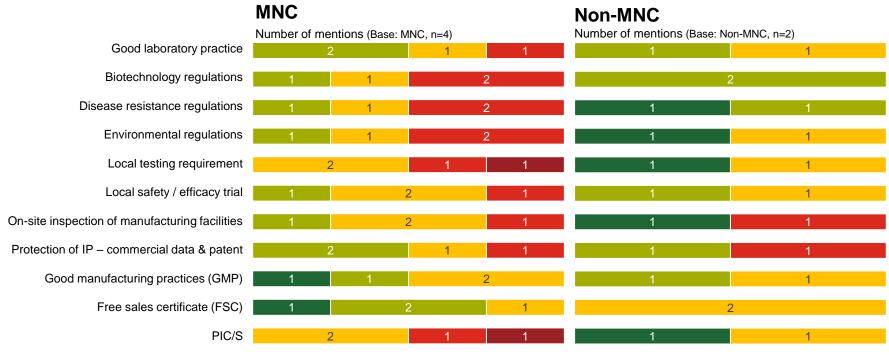
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D3. Thinking about Government Regulations in your country/ASEAN, how would you assess the impact of each of the areas of regulation listed below on your ABILITY TO BRING NEW PRODUCT successfully and in a timely manner to your country/ASEAN?

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CAMBODIA: Impact of govt. regulation on ability to bring new AH product successfully and timely manner to market

PIC/S is considered one area of regulation that could potentially be challenging in bringing new AH products to market, in addition to local testing requirements...feedbacks for MNC companies.



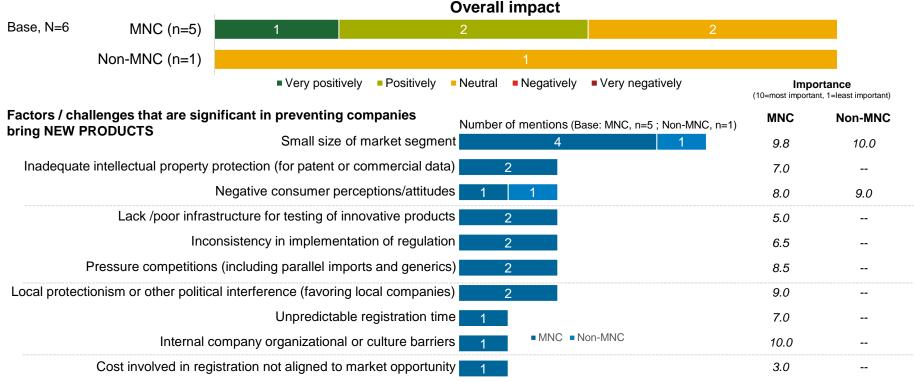
Note: Halal certification requirements is excluded in the report as it is not application to this country

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[■] Very helpful ■ Helpful ■ No impact ■ Unhelpful ■ Very unhelpful

MYANMAR: Impact of regulatory environment in bringing new AH animal health product

MNC companies generally agreed that regulatory environment in Myanmar are positive or at least neutral to their ability to bring new products to market. The only limitation in the market size – small, hence not always viable in bringing new product(s) to this marketplace



D1. How does the regulatory environment in your country/ASEAN impact your ability to BRING NEW PRODUCT TO MARKET? D2. Which of these, if any, are significant in preventing you to BRING NEW PRODUCT to your country/ASEAN?

MYANMAR: Impact of govt. regulation on ability to bring new AH product successfully <u>and</u> timely manner to market Local safety/efficacy trials, on-site inspection of manufacturing facilities and PIC/S are the areas in the current regulation that limit the ability to bring new products successfully and timely manner

Base, N=6 (combined both MNC & Non-MNC)

Note: Halal certification requirements is excluded in the report as it is not application to this country

Data shown no of mentions

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Bottom 2

boxes

(Very Unhelpful)

Top 2

boxes

(Very helpful) +

Data snown no. of mentions							(Helpful)	+ (Unhelpful)
Good laboratory practice	1	2		2		1	3	1
Biotechnology regulations	1	2		2		1	3	1
Disease resistance regulations	2		1	2		1	3	1
Environmental regulations		4			2		4	
Local testing requirement		3		2		1	3	1
Local safety / efficacy trial	1	2		1	2		3	2
On-site inspection of manufacturing facilities	1	1	2		1	1	2	2
Protection of IP – commercial data & patent	1	2		2		1	3	1
Good manufacturing practices (GMP)	2			3		1	5	1
Free sales certificate (FSC)	2			4			6	
PIC/S	2		2		1	1	2	2

No impact

Unhelpful

Very unhelpful

Helpful

Very helpful

D3. Thinking about Government Regulations in your country/ASEAN, how would you assess the impact of each of the areas of regulation listed below on your ABILITY TO BRING NEW PRODUCT successfully and in a timely manner to your country/ASEAN?

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